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**ExxonMobil Pipeline Company**

# SCAT Area Transition Report for C56-C88

Silvertip Pipeline Incident
Laurel, Montana

November 2, 2011

# SCAT Area Transition Report for C56-C88

Silvertip Pipeline Incident
Laurel, Montana

Prepared for:
ExxonMobil Pipeline Company

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Our Ref.:
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Date:
November 2, 2011

*The observations described in this Report were made exclusively under the conditions at the time and subject to the limitations stated therein. It is understood by Client that ARCADIS has relied on the accuracy of documents, oral information, and other material and information provided by sources documented in this report, including but not limited to information provided by Client and Client's other contractors. ARCADIS has not independently verified any such information. The conclusions presented in the Report are based solely upon the observations and representations made by others.*

ARCADIS

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## 1. Executive Summary of Oil Removal Activities

This Shoreline Cleanup Assessment Technique (SCAT) Area Transition Report provides a summary of the SCAT surveys conducted to determine the extent of oiling along the riverbanks and floodplain within SCAT Areas C56-C88, as well as the oil remediation activities completed in this area based on the SCAT Team recommendations. This report also summarizes the environmental samples collected in SCAT Areas C56-C88. This report is intended to be read and used in conjunction with the Summary of Assessment and Oil Removal Activities report.

### 1.1 Land Ownership and Access Issues

Figures 1-1 through 1-9 provide aerial maps of SCAT Areas C56-C88, along with the (a) SCAT Area boundary, (b) parcel boundaries and respective property owners, and (c) access constraints identified during the oil cleanup process. The acreages surveyed are listed below in Table 1. There were no access issues for SCAT Areas C56-C88.

**Table 1 Acreage Surveyed by Area**

| **Area** | **C56** | **C57** | **C58** | **C59** | **C60** | **C61** | **C62** | **C63** | **C64** | **C65** | **C66** |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **Acreage** | 125.4 | 220.9 | 135.9 | 89.8 | 9.6 | 25.9 | 84.1 | 181.8 | 155.8 | 14.8 | 87.3 |
| | | | | | | | | | | | |
| **Area** | **C67** | **C68** | **C69** | **C70** | **C71** | **C72** | **C73** | **C74** | **C75** | **C76** | **C77** |
| **Acreage** | 34.1 | 38.9 | 22.4 | 4.0 | 0.7 | 176.6 | 191.0 | 119.6 | 21.4 | 236.4 | 119.3 |
| | | | | | | | | | | | |
| **Area** | **C78** | **C79** | **C80** | **C81** | **C82** | **C83** | **C84** | **C85** | **C86** | **C87** | **C88** |
| **Acreage** | 118.9 | 109.2 | 28.9 | 17.9 | 88.8 | 20.9 | 82.4 | 35.1 | 107.0 | 25.2 | 63.9 |

### 1.2 Cultural, Historic, and Natural Resource Constraints

SCAT Areas C56-C88 were not investigated by Cultural Heritage personnel due to low levels of oiling in Division C.

Figures 2-1 through 2-12 summarize the natural resources identified in SCAT Areas C56-C88. International Bird Rescue, Resource Advisors from U.S. Fish and Wildlife Service, and other parties conducted limited inspections of these segments due to the low level of oiling in Division C. One deceased goldeye fish (*Hiodon alosoides*) with no

visible oiling was identified in Area C73 and retained. An osprey (*Pandion haliaetus*) nest was also identified in Area C73. Two lightly oiled American white pelicans (*Pelecanus erythrorhynchos*) were observed in Area C74; these animals were not captured for cleaning. In addition, bald eagle (*Haliaeetus leucocephalus*) nests were identified in Areas C56, C59, C62, C64, C69, C72, C74, C76, C80, C85, and C88, and the bald eagle nesting buffer zones were provided to Operations to protect the nests. No Wildlife Priority Cleanup Areas were identified in SCAT Areas C56-C88.

### 1.3 Summary of Environmental Sampling

Table 2 (below) summarizes samples collected within SCAT Areas C56-C88. The analytical results for the samples collected can be accessed through a publicly accessible database on the United States Environmental Protection Agency's (USEPA's) website. The approximate locations of samples collected within SCAT Areas C56-C88 are provided on Figures 3-1 to 3-6.

**Table 2 Environmental Sampling Summary**

| Area | Agency | Sample Num | Date | Matrix | Location | Latitude | Longitude |
|---|---|---|---|---|---|---|---|
| C56 | CTEH | PPMT0808DW301 | 8/8/2011 | Water_Drinking | PPMT_512_DW301 | 45.991350 | -107.952585 |
| C57 | | No Samples Collected* | | | | | |
| C58 | | No Samples Collected* | | | | | |
| C59 | | No Samples Collected* | | | | | |
| C60 | | No Samples Collected* | | | | | |
| C61 | | No Samples Collected* | | | | | |
| C62 | | No Samples Collected* | | | | | |
| C63 | | No Samples Collected* | | | | | |
| C64 | | No Samples Collected* | | | | | |
| C65 | | No Samples Collected* | | | | | |
| C66 | | No Samples Collected* | | | | | |
| C67 | | No Samples Collected* | | | | | |
| C68 | | No Samples Collected* | | | | | |
| C69 | CTEH | PPMT0809SW201 | 8/9/2011 | Water_Surface | PPMT_SW201 | 46.059885 | -107.785018 |
| C69 | CTEH | PPMT0809SW202 | 8/9/2011 | Water_Surface | PPMT_SW202 | 46.058296 | -107.785064 |
| C71 | | No Samples Collected* | | | | | |
| C72 | | No Samples Collected* | | | | | |
| C73 | EPA | SPSE124_071511 | 7/15/2011 | Sediment | SPSE124 | 46.073705 | -107.718390 |
| C74 | | No Samples Collected* | | | | | |
| C75 | | No Samples Collected* | | | | | |
| C76 | | No Samples Collected* | | | | | |
| C77 | | No Samples Collected* | | | | | |
| C78 | EPA | SPSW504_072511 | 7/25/2011 | Water_Surface | SPSW504 | 46.107992 | -107.637601 |
| C78 | CTEH | CUMT0725SW504 | 7/25/2011 | Water_Lab | C78 | 46.108008 | -107.637564 |
| C78 | CTEH | CUMT0725SW504 | 7/25/2011 | Water_Surface | C78 | 46.108008 | -107.637564 |
| C79 | | No Samples Collected* | | | | | |
| C80 | | No Samples Collected* | | | | | |
| C81 | | No Samples Collected* | | | | | |
| C82 | | No Samples Collected* | | | | | |
| C83 | EPA | SPSE125_071511 | 7/15/2011 | Sediment | SPSE125 | 46.142797 | -107.548890 |
| C84 | | No Samples Collected* | | | | | |
| C85 | | No Samples Collected* | | | | | |
| C86 | | No Samples Collected* | | | | | |
| C87 | | No Samples Collected* | | | | | |
| C88 | EPA | SPSE126_071511 | 7/15/2011 | Sediment | SPSE126 | 46.144634 | -107.464595 |

Appendix A contains a summary of sample results with detections for this sample set. Detections with a result above the screening level are highlighted; for this set, there were six exceedances for benzo(a)anthracene, chrysene, fluoranthene, phenanthrene, pyrene, and total extractable hydrocarbons.

### 1.4 Summary of Initial SCAT Surveys

The SCAT teams used systematic evaluation criteria and treatment method tables approved by the National Oceanic and Atmospheric Administration to provide a standard approach for data collection and conducting field surveys. The forms and sketches from the initial SCAT surveys performed along the river bank (water edge) and floodplain within SCAT Areas C56-C88 are included in Appendix B. Figures 4-1 through 4-33 provide the maximum oiling zones observed by the SCAT team during the initial surveys of SCAT Areas C56-C88.

### 1.5 Applicable Compiled Treatment Recommendations

The SCAT team developed compiled treatment recommendations (CTRs) providing approved treatment methods (ATMs) for each oiling zone identified during the initial SCAT surveys (CTR No. 61 and CTR No. 62).

### 1.6 Oil Removal Activities

Oil removal activities were conducted within SCAT Areas C56-C88 in accordance with the ATMs identified in the CTRs. Appendix I of the Summary of Assessment and Oil Removal Activities report presents this data including: date range/days worked, average number of people working per day, equipment used, and various types of bags removed: oily debris, personal protective equipment, plastic, trash, super sacks, wood chips, and contaminated wood.

### 1.7 Pre-Inspection Survey Transmittal

A Pre-Inspection Survey Transmittal (PIST) was not conducted for SCAT Areas C56-C88.

### 1.8 Post-Inspection Survey Transmittal

A Post-Inspection Survey Transmittal (POST) was not conducted for SCAT Areas C56-C88.

### 1.9 Summary of Final SCAT Surveys

Figures 5-1 through 5-8 show the oiling conditions within SCAT Areas C56-C88 following completion of oil removal activities. The SCAT team performed final surveys

within the SCAT Areas indicated with an 'F' in Table 3 to confirm the agreed-upon cleanup endpoints identified in the applicable CTRs had been achieved. The final SCAT survey documentation is presented in Appendix E.

**Table 3 SCAT Surveys by Segment**

| SCAT Area | Right Bank | Left Bank | Island |
|---|---|---|---|
| C56 | F | I | F |
| C57 | I | I | F |
| C58 | I | I | -- |
| C59 | I | I | I |
| C60 | I | I | I |
| C61 | I | F | -- |
| C62 | I | F | F |
| C63 | I | I | F |
| C64 | I | I | I |
| C65 | F | I | I |
| C66 | F | I | -- |
| C67 | -- | I | -- |
| C68 | -- | I | -- |
| C69 | -- | I | -- |
| C70 | -- | I | -- |
| C71 | -- | I | -- |
| C72 | I | I | -- |
| C73 | F | I | -- |
| C74 | I | I | -- |
| C75 | I | I | -- |
| C76 | I | I | -- |
| C77 | I | I | -- |
| C78 | I | I | -- |
| C79 | I | I | -- |
| C80 | I | I | I |
| C81 | I | I | -- |
| C82 | I | I | -- |
| C83 | I | I | -- |
| C84 | I | I | -- |

| SCAT Area | Right Bank | Left Bank | Island |
|---|---|---|---|
| C85 | I | I | -- |
| C86 | I | I | -- |
| C87 | I | -- | I |
| C88 | I | I | I |

Notes:

I - Initial SCAT surveys only conducted for this segment

F - Final and initial SCAT surveys conducted for this segment

-- - No SCAT surveys conducted

### 1.10 SCAT Area Conclusions

Based on the initial SCAT surveys performed in segments indicated with an 'I' in Table 3, either no oiling was observed, no further treatment is recommended, or natural attenuation is recommended. Based on the final SCAT surveys performed in segments indicated with an 'F' in Table 3, no further treatment is recommended for these segments and SCAT Area Sign-Off Forms for these segments are included as Appendix F.

ARCADIS

**SCAT Area Transition Report for C56 to C88**

Silvertip Pipeline Incident
Laurel, Montana

**2. Transition Sign-Off Form**

## SCAT Area Transition Report for C56 to C88

**Prepared for:**

**Unified Command**

11-4-11
Date

Unified Command – RP

# SCAT Area Transition Report for C56-C88

**Prepared for:**

**Unified Command**

11/7/2011

Date

S. MERRITT

Unified Command – FOSC

**2. Transition Sign-Off Form**

## SCAT Area Transition Report for C56 to C88

**Prepared for:**

**Unified Command**

11/7/11
Date

Laura Alvey
Unified Command – MDEQ

# Silvertip Pipeline Incident
# Area Transition Report Map - Parcels
## Segment - C56 - C59

10/18/2011

1:22,000

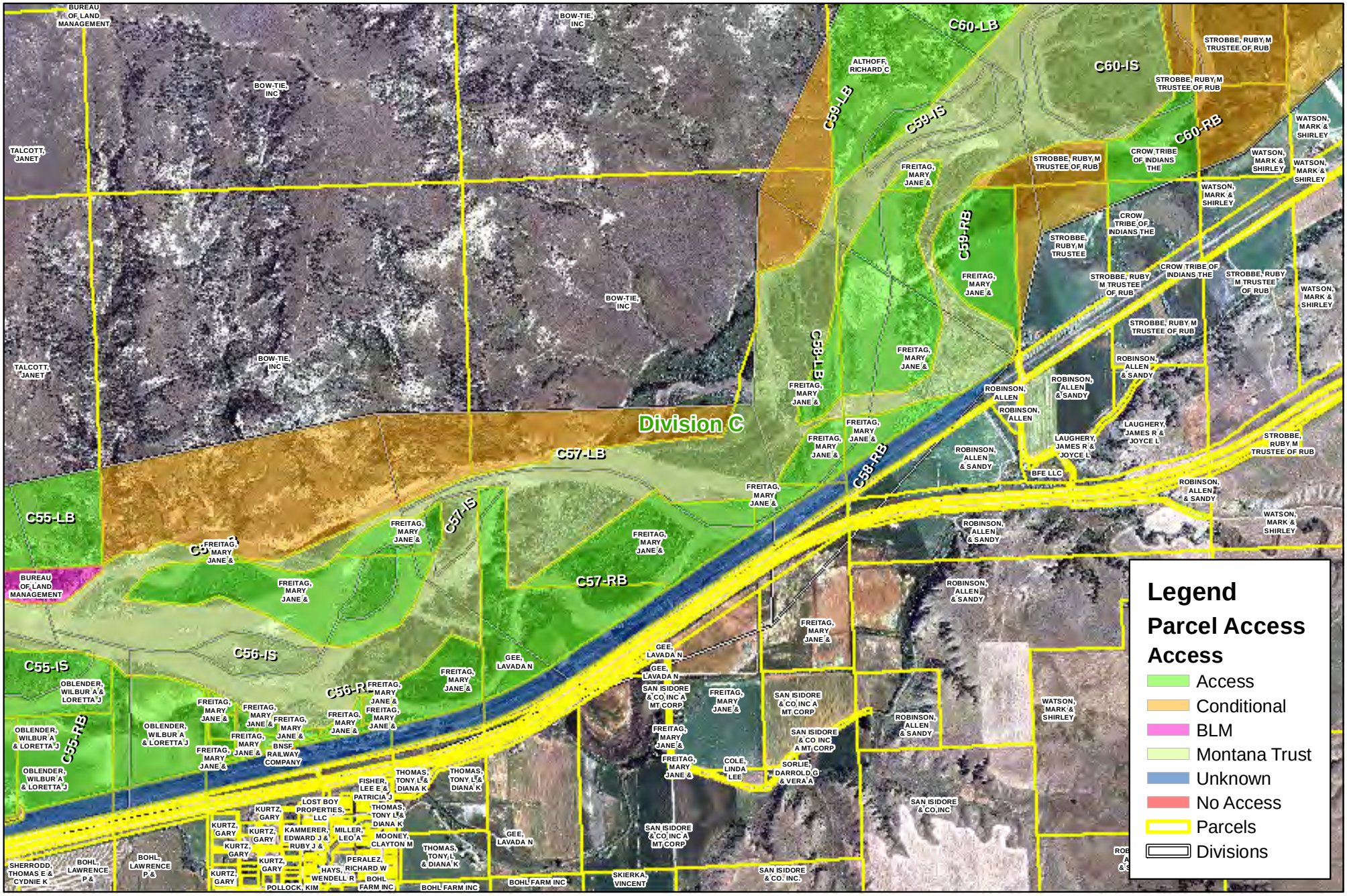



Figure 1-1

Date: 10/18/2011 Time: 2:50:45 PM

# Silvertip Pipeline Incident
# Area Transition Report Map - Parcels
## Segment - C60 - C64

10/18/2011

1:22,000

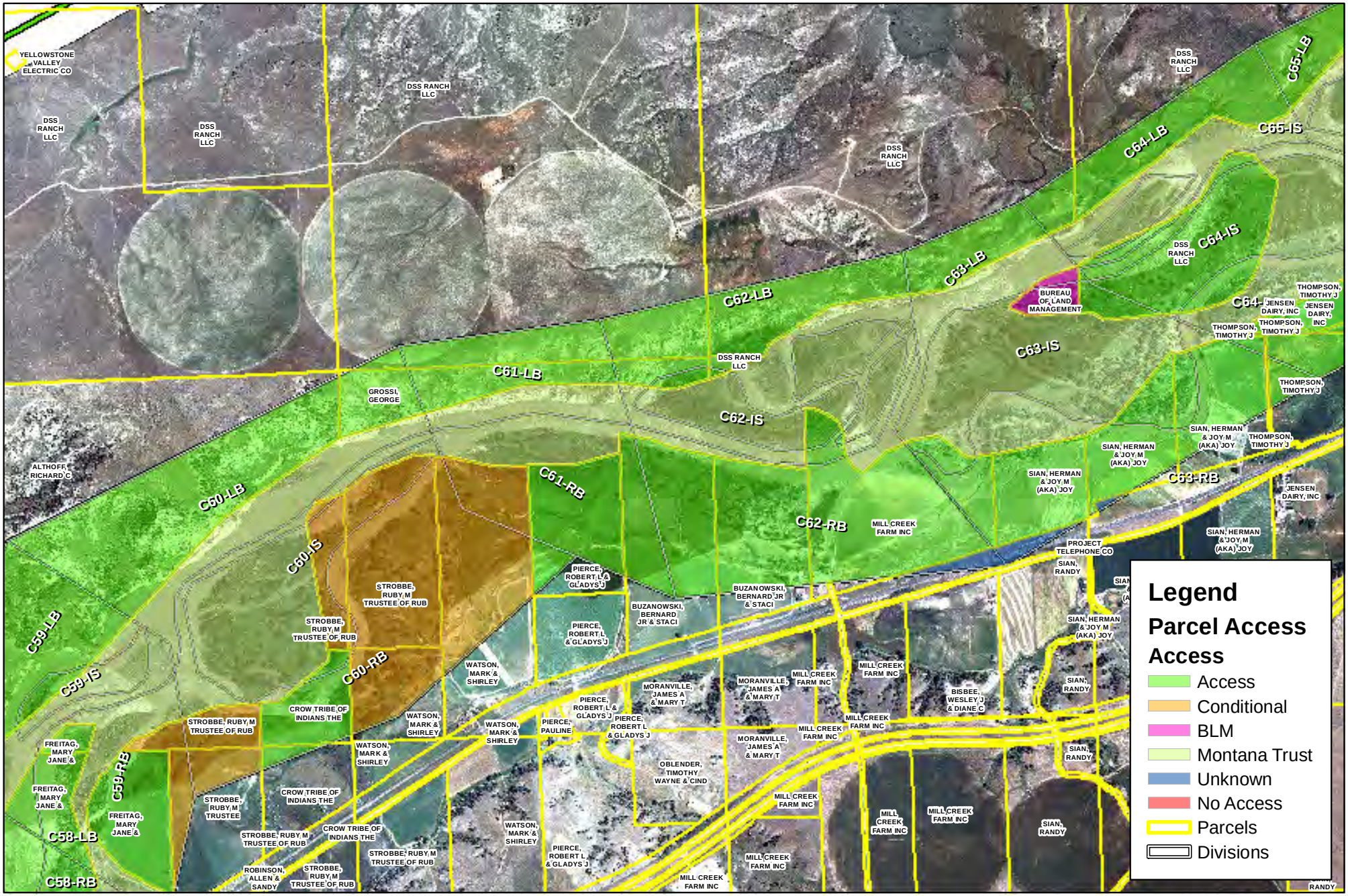



Figure 1-2

Date: 10/18/2011 Time: 2:52:06 PM

# Silvertip Pipeline Incident
## Area Transition Report Map - Parcels
### Segment - C65 - C69

10/18/2011

1:22,000

Figure 1-3

Date: 10/18/2011 Time: 2:53:01 PM

# Silvertip Pipeline Incident
# Area Transition Report Map - Parcels
## Segment - C69 - C72

10/18/2011

1:22,000

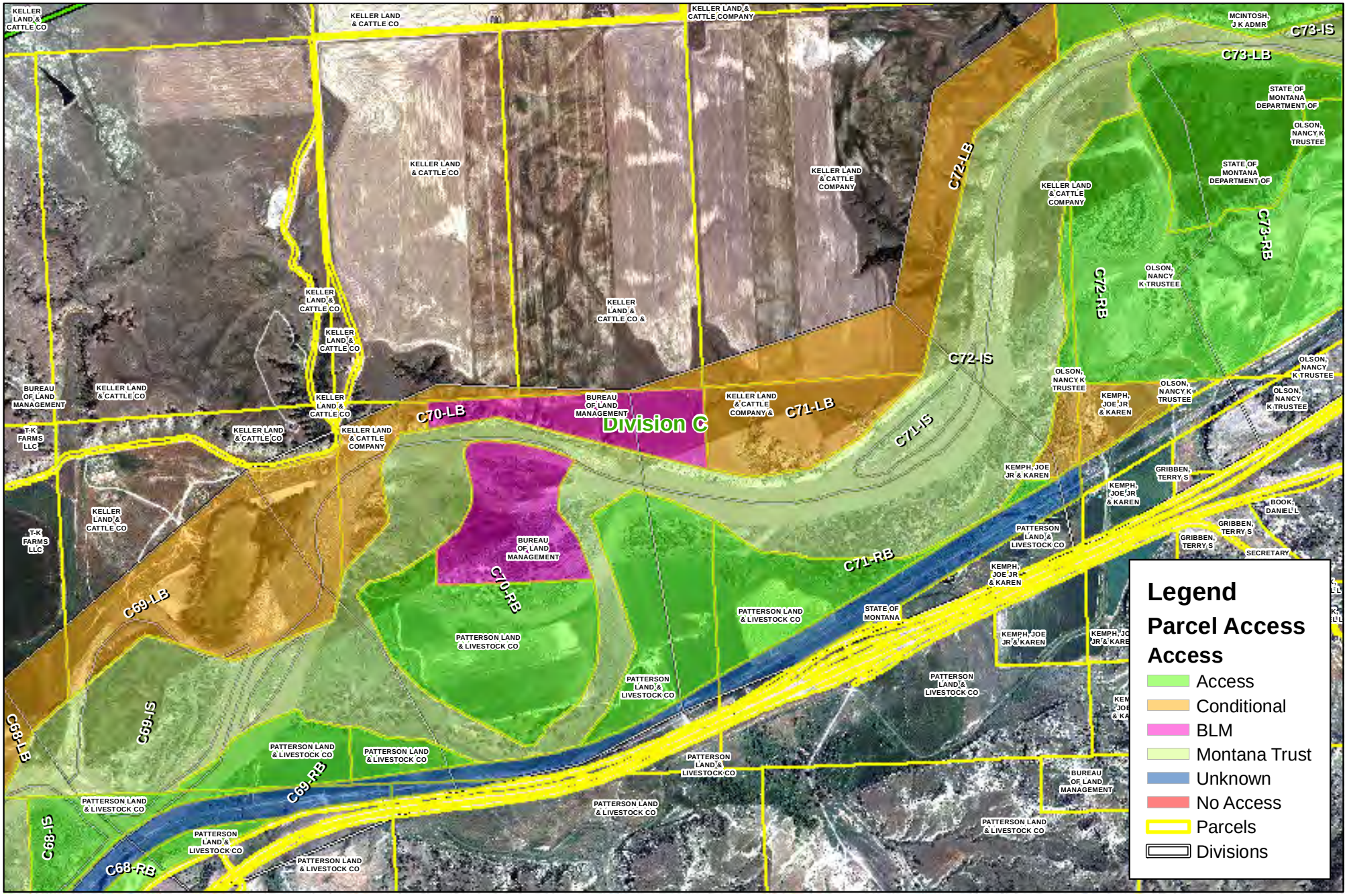


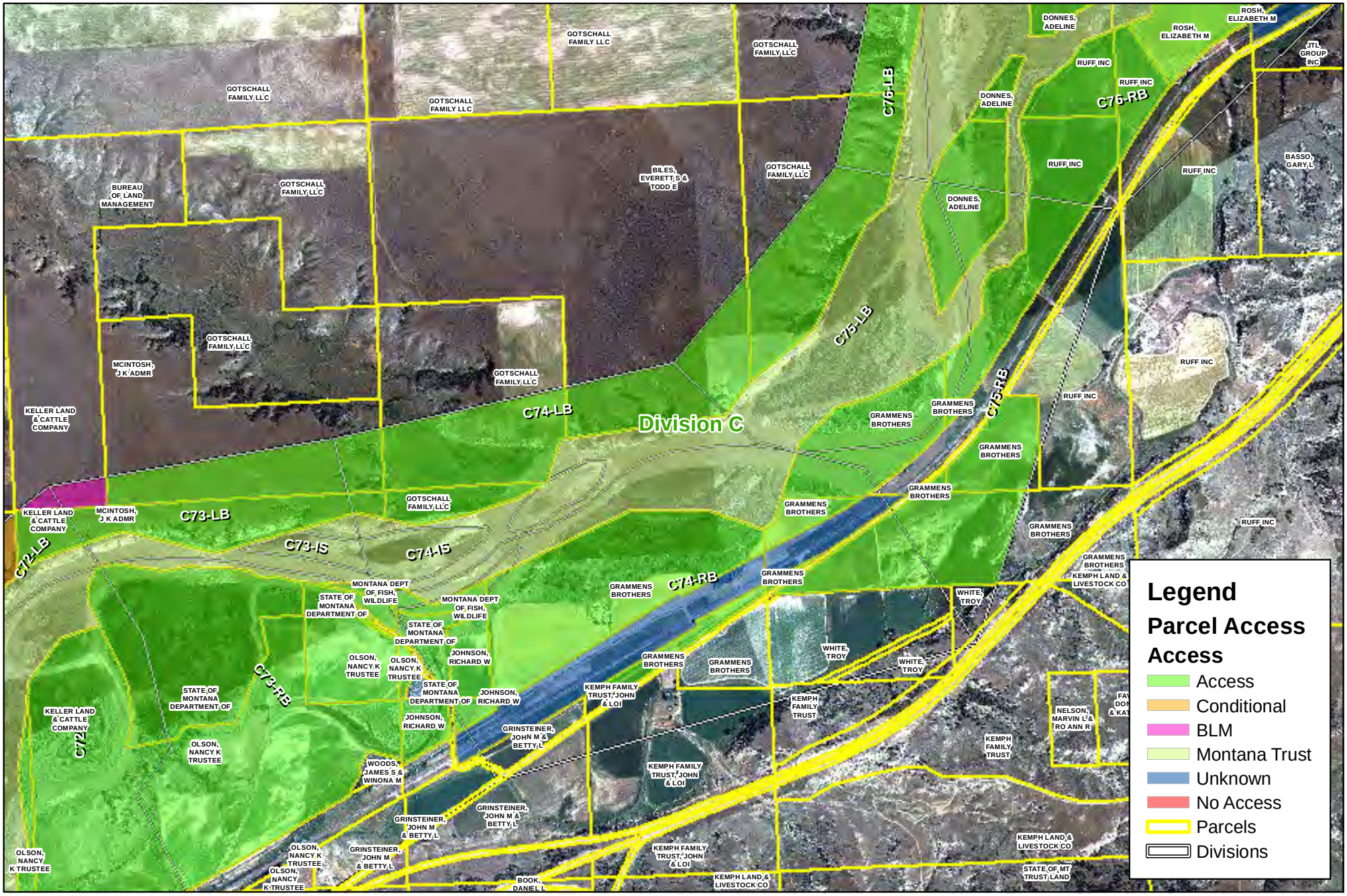

Figure 1-4

Date: 10/18/2011 Time: 2:57:59 PM

# Silvertip Pipeline Incident
## Area Transition Report Map - Parcels
### Segment - C73 - C75

10/18/2011

1:22,000




0 2,200 4,400 8,800 Feet

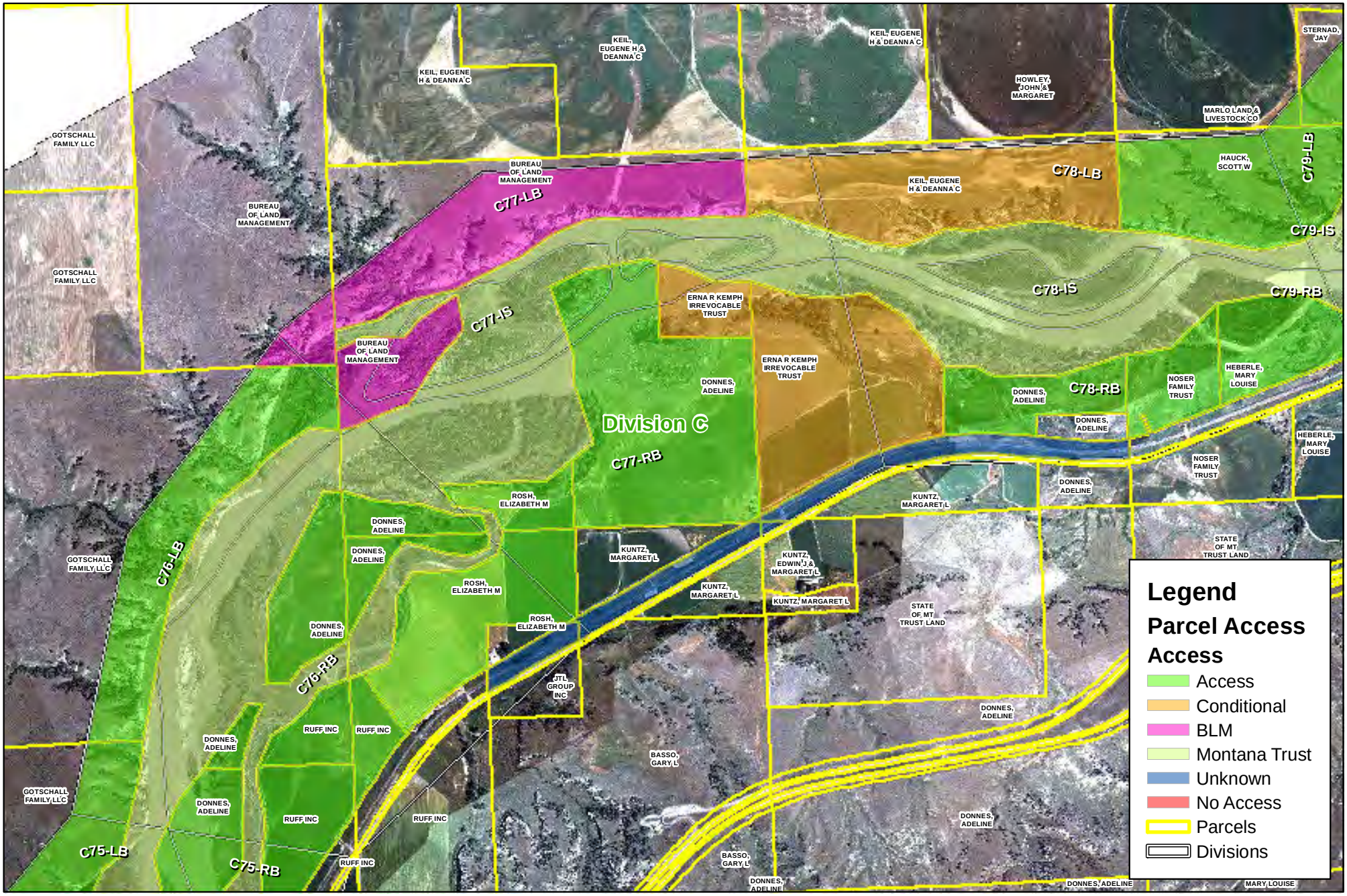
Figure 1-5

Date: 10/18/2011 Time: 2:59:27 PM

# Silvertip Pipeline Incident
# Area Transition Report Map - Parcels
## Segment - C76 - C78

10/18/2011

1:22,000




0 2,200 4,400 8,800 Feet

Figure 1-6

Date: 10/18/2011 Time: 3:00:23 PM

# Silvertip Pipeline Incident
# Area Transition Report Map - Parcels
## Segment - C79 - C81

10/18/2011

1:22,000

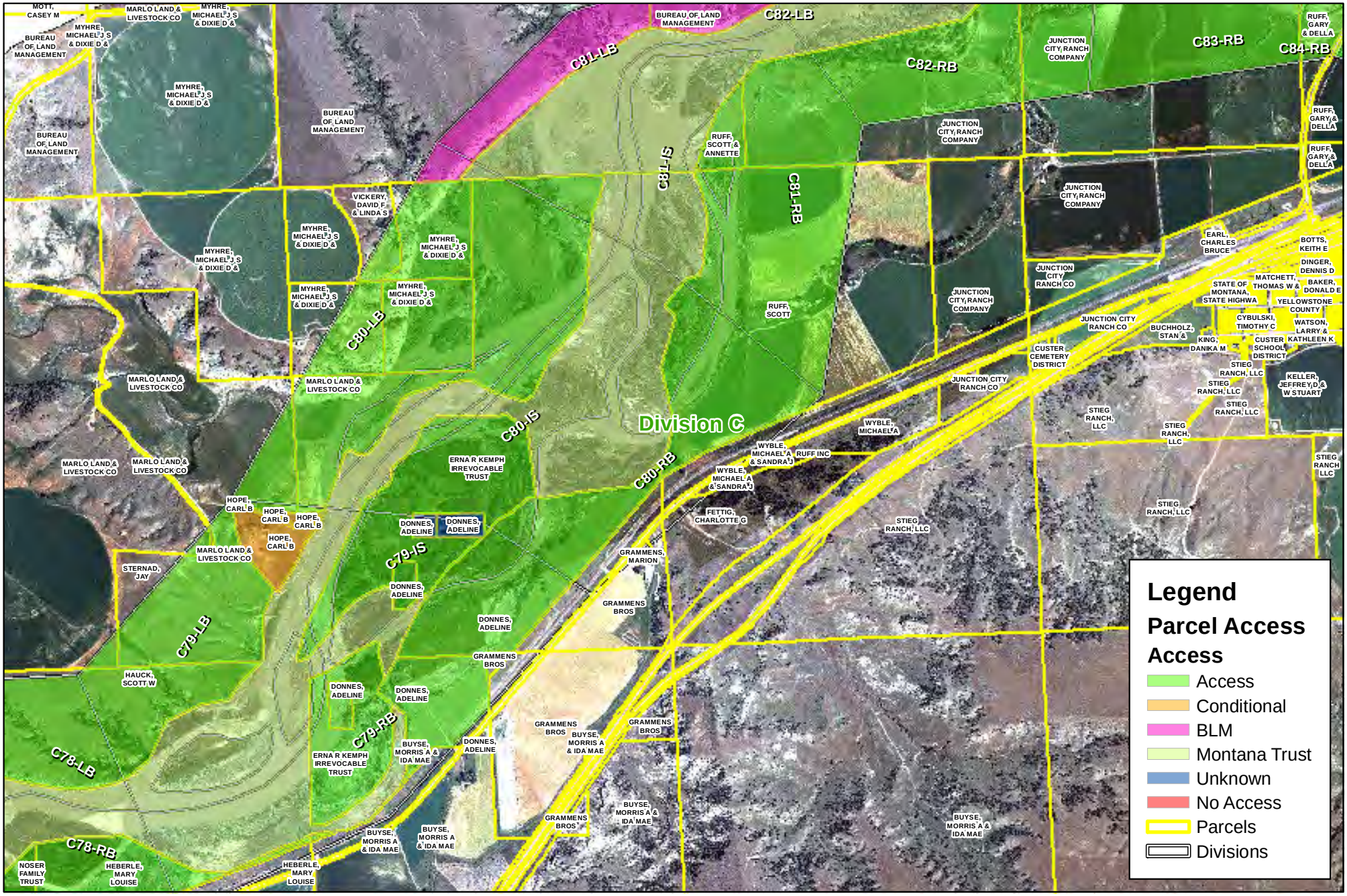


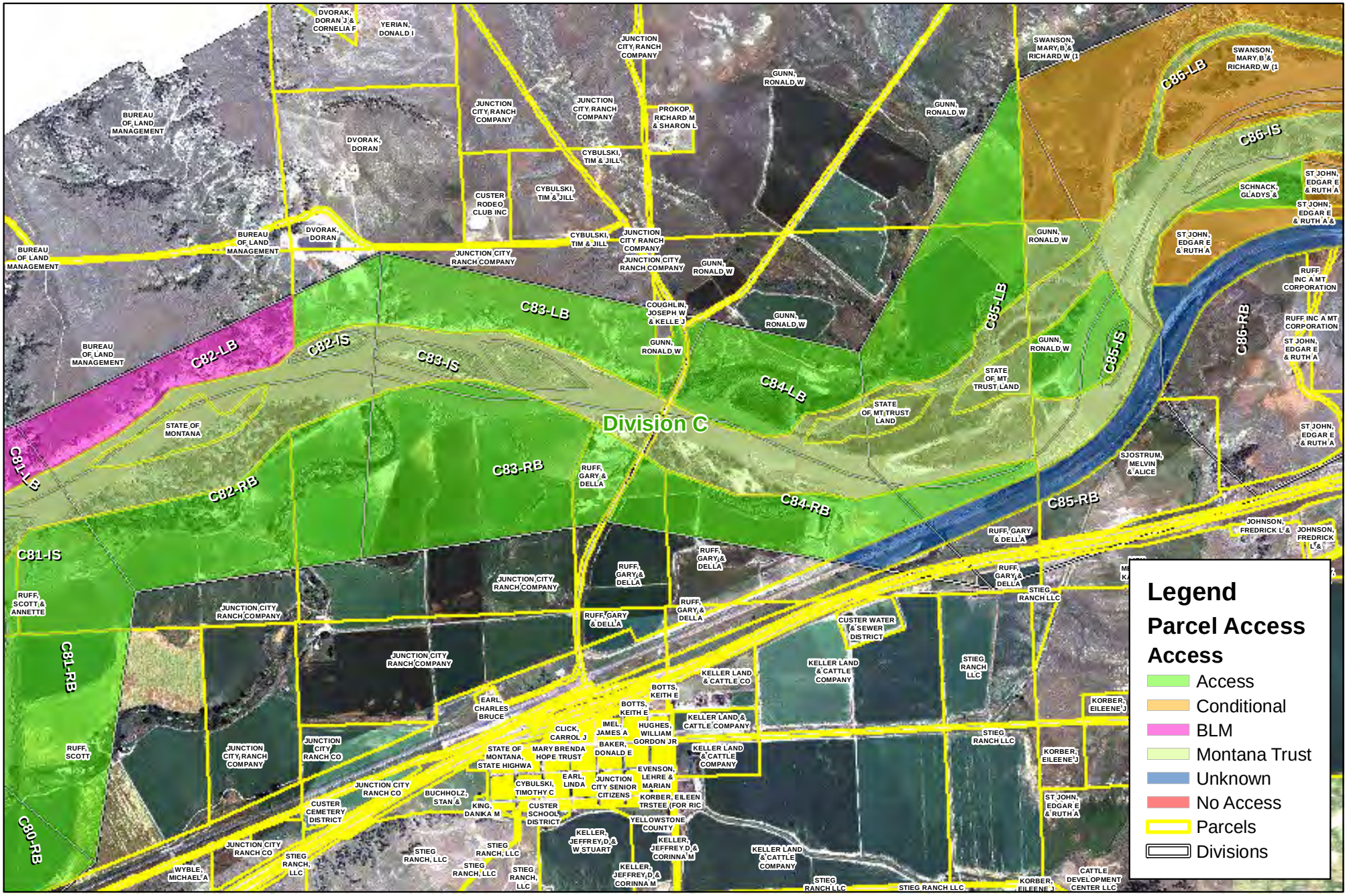

Figure 1-7

Date: 10/18/2011 Time: 3:01:42 PM

# Silvertip Pipeline Incident
# Area Transition Report Map - Parcels
## Segment - C81 - C86

10/18/2011

1:22,000




0 2,200 4,400 8,800 Feet

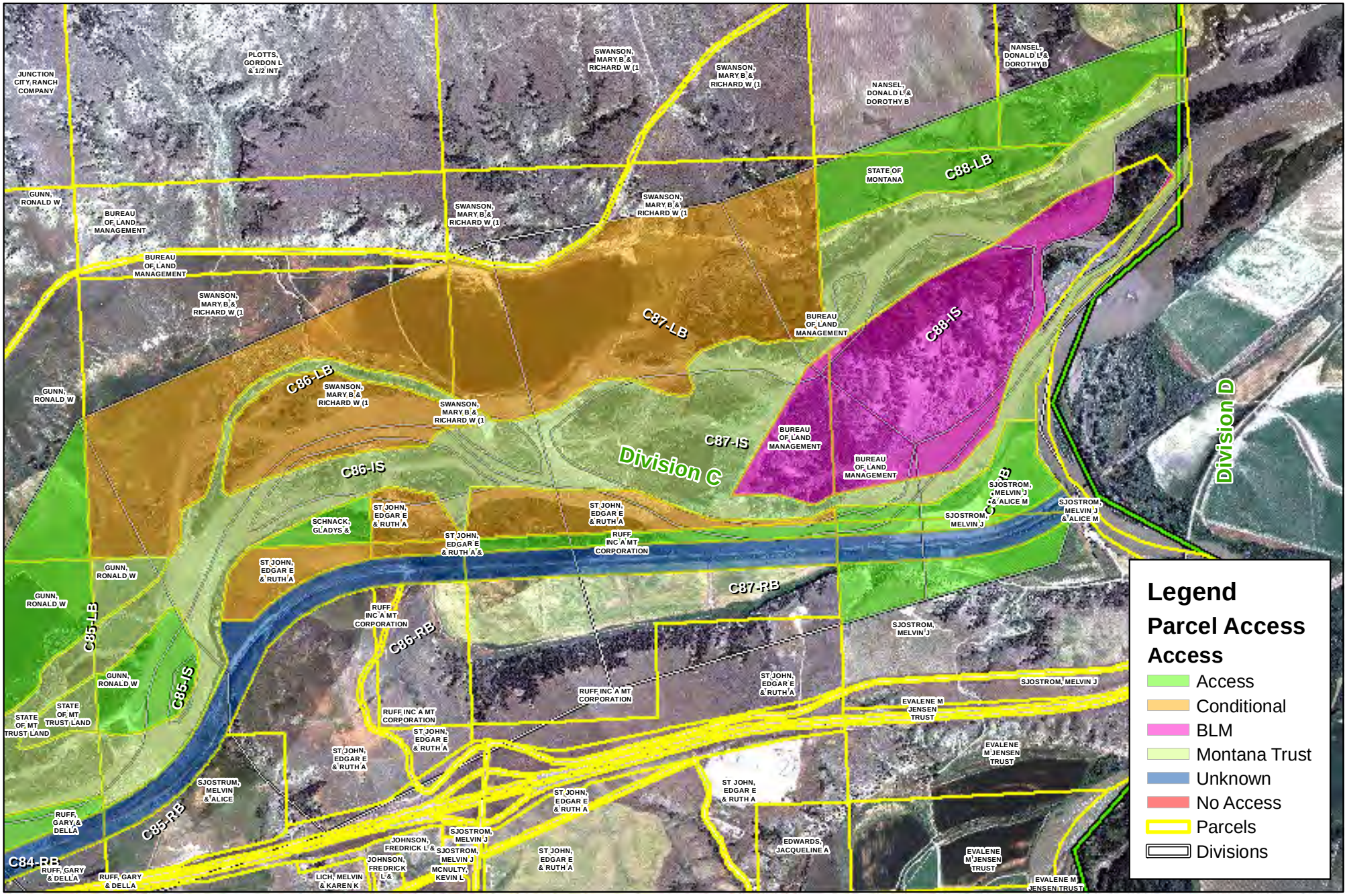
Figure 1-8

Date: 10/18/2011 Time: 3:03:25 PM

# Silvertip Pipeline Incident
## Area Transition Report Map - Parcels
### Segment - C86 - C88

10/18/2011

1:22,000




0 2,200 4,400 8,800 Feet

Figure 1-9

Date: 10/18/2011 Time: 3:04:31 PM

# Silvertip Pipeline Incident
# SCAT Area Transition Report Map
## Area - C56

ExxonMobil Pipeline

N

1:12,000

10/18/2011

The Response Group

Path: P:\GIS\MXD's\Wildlife\ATR Maps - Figure 2\ATR Map_Div.C_56-88_Fig2_09282011.mxd

Note: Multiple individuals of the same species and status at a single location are denoted by a number label adjacent to the wildlife symbol.

0 1,250 2,500 5,000 Feet

**Figure 2-1**
**Wildlife Resources**

Date: 10/18/2011 Time: 11:10:18 AM

# Silvertip Pipeline Incident
# SCAT Area Transition Report Map
## Area - C59

ExxonMobil Pipeline

N

1:12,000

10/18/2011

The Response Group

Path: P:\GIS\MXD's\Wildlife\ATR Maps - Figure 2\ATR Map_Div.C_56-88_Fig2_09282011.mxd

Note: Multiple individuals of the same species and status at a single location are denoted by a number label adjacent to the wildlife symbol.

0 1,250 2,500 5,000 Feet

**Figure 2-2**
**Wildlife Resources**

Date: 10/18/2011 Time: 11:12:37 AM

# Silvertip Pipeline Incident
# SCAT Area Transition Report Map
## Area - C62

ExxonMobil Pipeline

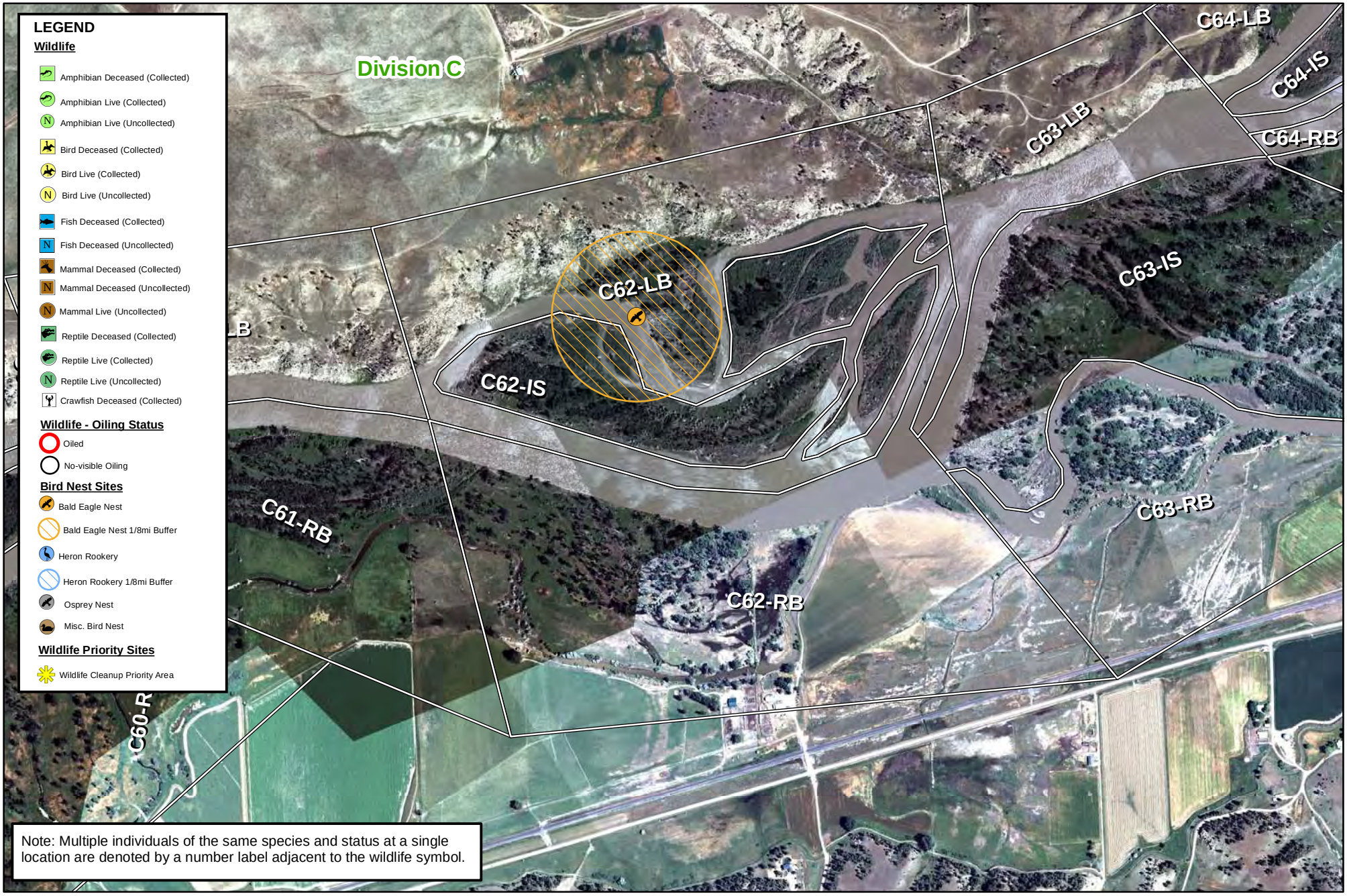
N

1:12,000

10/18/2011

The Response Group

Path: P:\GIS\MXD's\Wildlife\ATR Maps - Figure 2\ATR Map_Div.C_56-88_Fig2_09282011.mxd




Note: Multiple individuals of the same species and status at a single location are denoted by a number label adjacent to the wildlife symbol.

0 1,250 2,500 5,000 Feet

**Figure 2-3**
**Wildlife Resources**

Date: 10/18/2011 Time: 11:19:31 AM

# Silvertip Pipeline Incident
# SCAT Area Transition Report Map
## Area - C64

ExxonMobil Pipeline

N

1:12,000

10/18/2011

The Response Group

Path: P:\GIS\MXD's\Wildlife\ATR Maps - Figure 2\ATR Map_Div.C_56-88_Fig2_09282011.mxd

Note: Multiple individuals of the same species and status at a single location are denoted by a number label adjacent to the wildlife symbol.

0 1,250 2,500 5,000 Feet

**Figure 2-4**
**Wildlife Resources**

Date: 10/18/2011 Time: 11:21:32 AM

# Silvertip Pipeline Incident
# SCAT Area Transition Report Map
## Area - C69

ExxonMobil Pipeline

N

1:12,000

10/18/2011

The Response Group

Path: P:\GIS\MXD's\Wildlife\ATR Maps - Figure 2\ATR Map_Div.C_56-88_Fig2_09282011.mxd

Note: Multiple individuals of the same species and status at a single location are denoted by a number label adjacent to the wildlife symbol.

0 1,250 2,500 5,000 Feet

Date: 10/18/2011 Time: 11:24:24 AM

**Figure 2-5**
**Wildlife Resources**

# Silvertip Pipeline Incident
# SCAT Area Transition Report Map
## Area - C72

ExxonMobil Pipeline

N

1:14,400

10/18/2011

The Response Group

Path: P:\GIS\MXD's\Wildlife\ATR Maps - Figure 2\ATR Map_Div.C_56-88_Fig2_09282011.mxd

0 1,500 3,000 6,000 Feet

**Figure 2-6**
**Wildlife Resources**

Date: 10/18/2011 Time: 11:26:16 AM

# Silvertip Pipeline Incident
# SCAT Area Transition Report Map
## Area - C73

ExxonMobil Pipeline

N

1:14,400

10/18/2011

The Response Group

Path: P:\GIS\MXD's\Wildlife\ATR Maps - Figure 2\ATR Map_Div.C_56-88_Fig2_09282011.mxd

Note: Multiple individuals of the same species and status at a single location are denoted by a number label adjacent to the wildlife symbol.

0 1,500 3,000 6,000 Feet

**Figure 2-7**
**Wildlife Resources**

Date: 10/18/2011 Time: 10:45:40 AM

# Silvertip Pipeline Incident
# SCAT Area Transition Report Map
## Area - C74

ExxonMobil Pipeline

N

1:14,400

10/18/2011

The Response Group

Path: P:\GIS\MXD's\Wildlife\ATR Maps - Figure 2\ATR Map_Div.C_56-88_Fig2_09282011.mxd

Note: Multiple individuals of the same species and status at a single location are denoted by a number label adjacent to the wildlife symbol.

0 1,500 3,000 6,000 Feet

**Figure 2-8**
**Wildlife Resources**

Date: 10/18/2011 Time: 10:50:19 AM

# Silvertip Pipeline Incident
# SCAT Area Transition Report Map
## Area - C76

ExxonMobil Pipeline

N

1:14,400

10/18/2011

The Response Group

Path: P:\GIS\MXD's\Wildlife\ATR Maps - Figure 2\ATR Map_Div.C_56-88_Fig2_09282011.mxd

Note: Multiple individuals of the same species and status at a single location are denoted by a number label adjacent to the wildlife symbol.

0 1,500 3,000 6,000 Feet

**Figure 2-9**
**Wildlife Resources**

Date: 10/18/2011 Time: 10:51:56 AM

# Silvertip Pipeline Incident
# SCAT Area Transition Report Map
## Area - C80

ExxonMobil Pipeline

N

1:14,400

10/18/2011

The Response Group

Path: P:\GIS\MXD's\Wildlife\ATR Maps - Figure 2\ATR Map_Div.C_56-88_Fig2_09282011.mxd

Note: Multiple individuals of the same species and status at a single location are denoted by a number label adjacent to the wildlife symbol.

0 1,500 3,000 6,000 Feet

**Figure 2-10**
**Wildlife Resources**

Date: 10/18/2011 Time: 10:53:52 AM

# Silvertip Pipeline Incident
# SCAT Area Transition Report Map
## Area - C85

ExxonMobil Pipeline

N

1:14,400

10/18/2011

The Response Group

Path: P:\GIS\MXD's\Wildlife\ATR Maps - Figure 2\ATR Map_Div.C_56-88_Fig2_09282011.mxd

Note: Multiple individuals of the same species and status at a single location are denoted by a number label adjacent to the wildlife symbol.

0 1,500 3,000 6,000 Feet

**Figure 2-11**
**Wildlife Resources**

Date: 10/18/2011 Time: 11:04:12 AM

# Silvertip Pipeline Incident
# SCAT Area Transition Report Map
## Area - C88

ExxonMobil Pipeline

N

1:14,400

10/18/2011

The Response Group

Path: P:\GIS\MXD's\Wildlife\ATR Maps - Figure 2\ATR Map_Div.C_56-88_Fig2_09282011.mxd

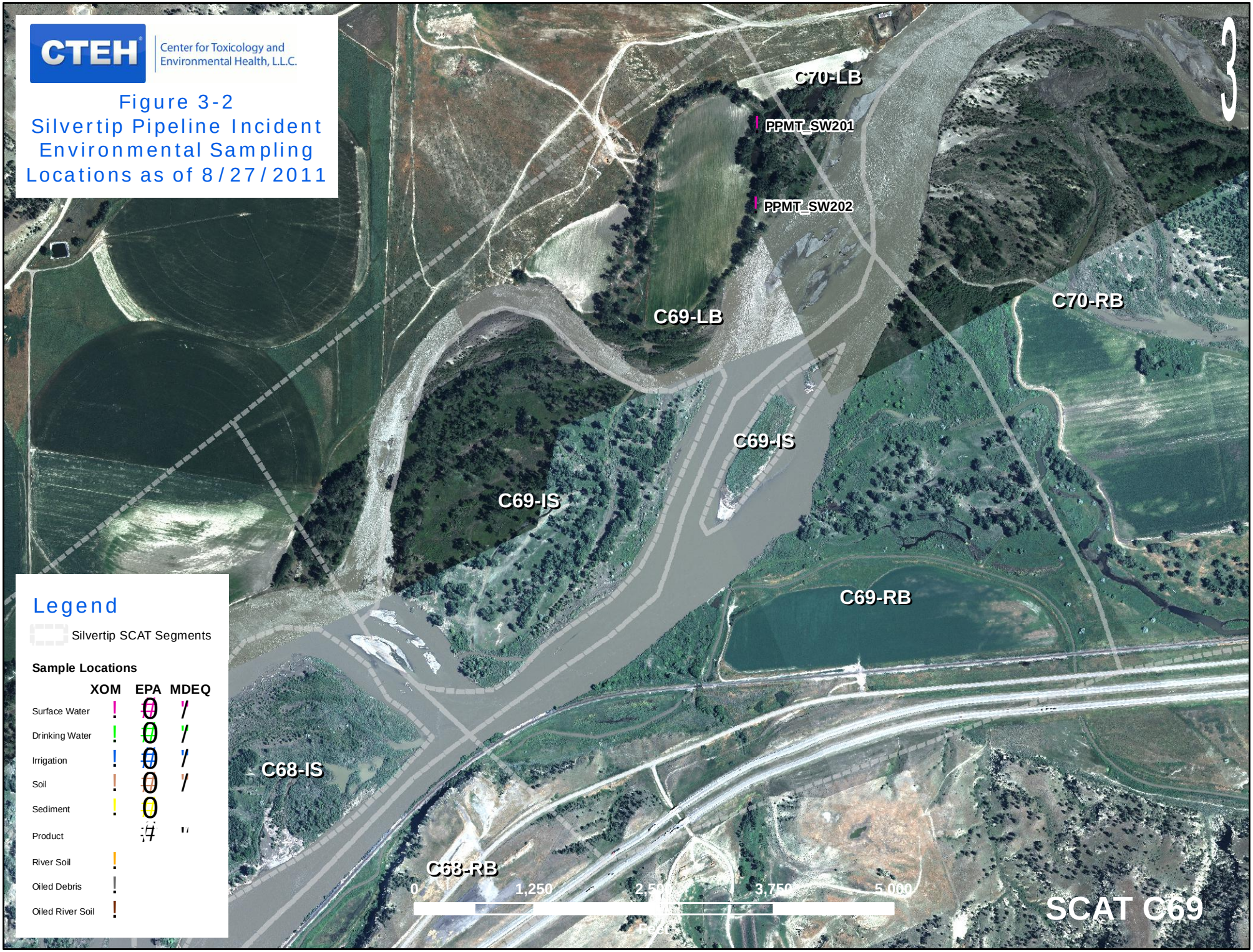
Note: Multiple individuals of the same species and status at a single location are denoted by a number label adjacent to the wildlife symbol.

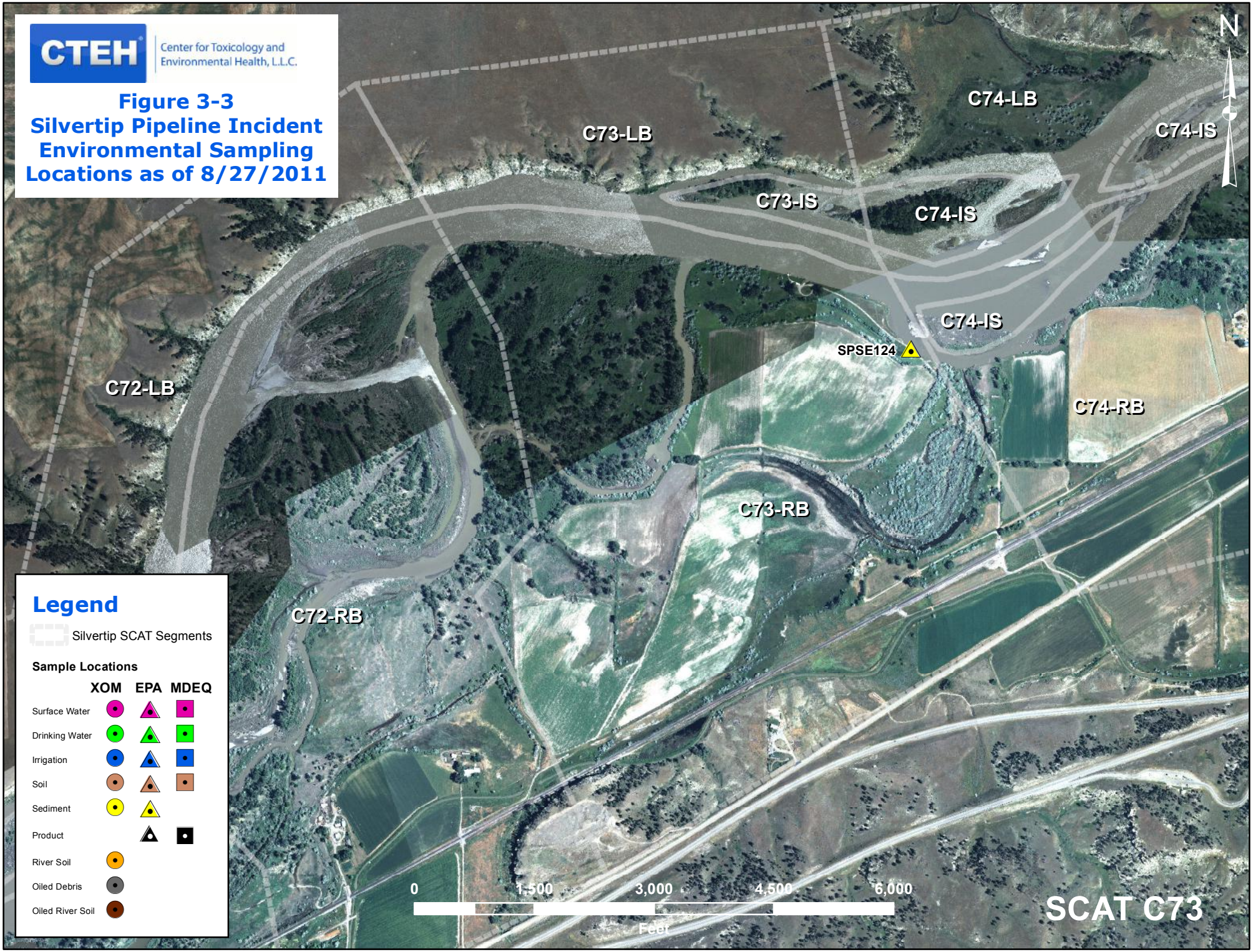
0 1,500 3,000 6,000 Feet

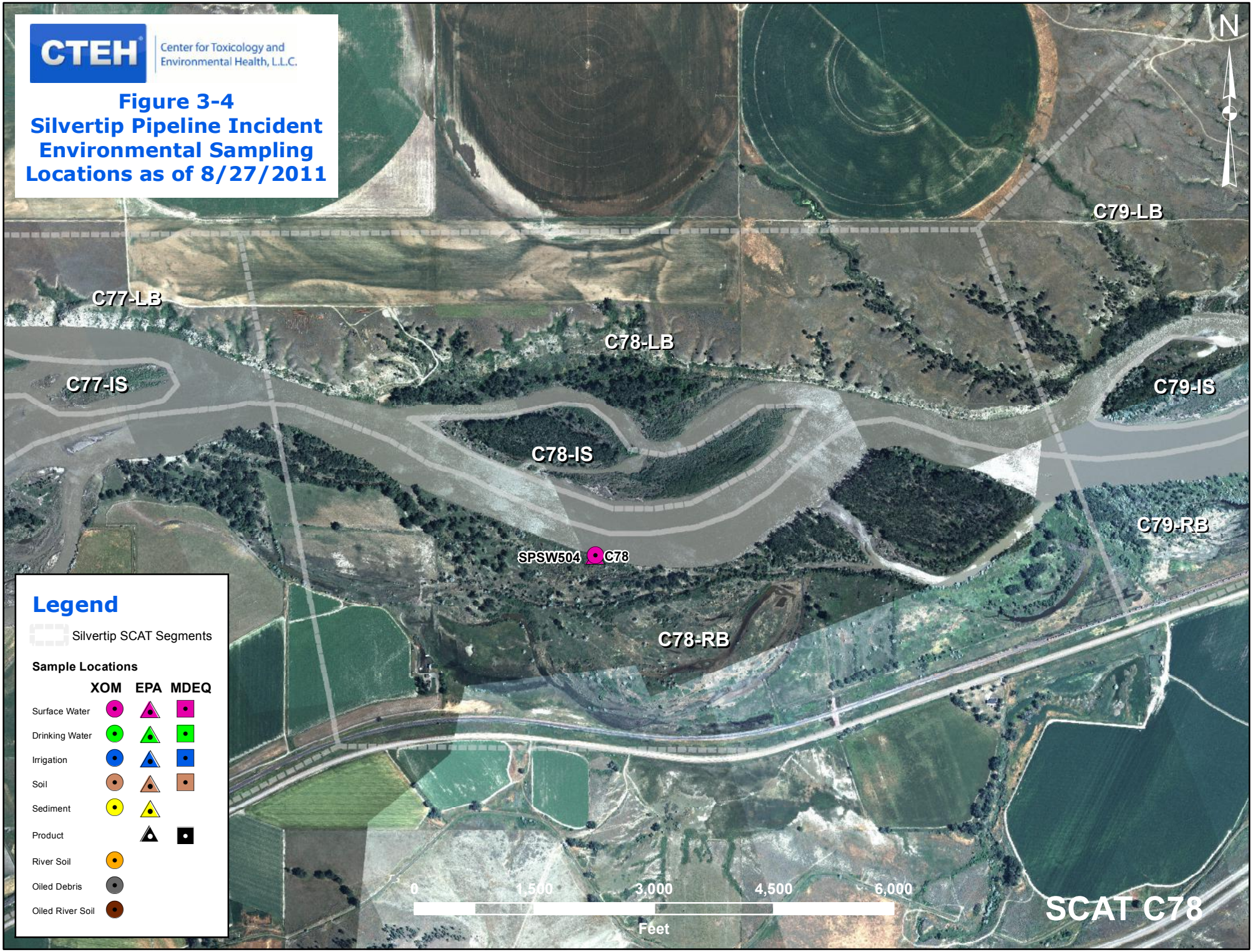
**Figure 2-12**
**Wildlife Resources**

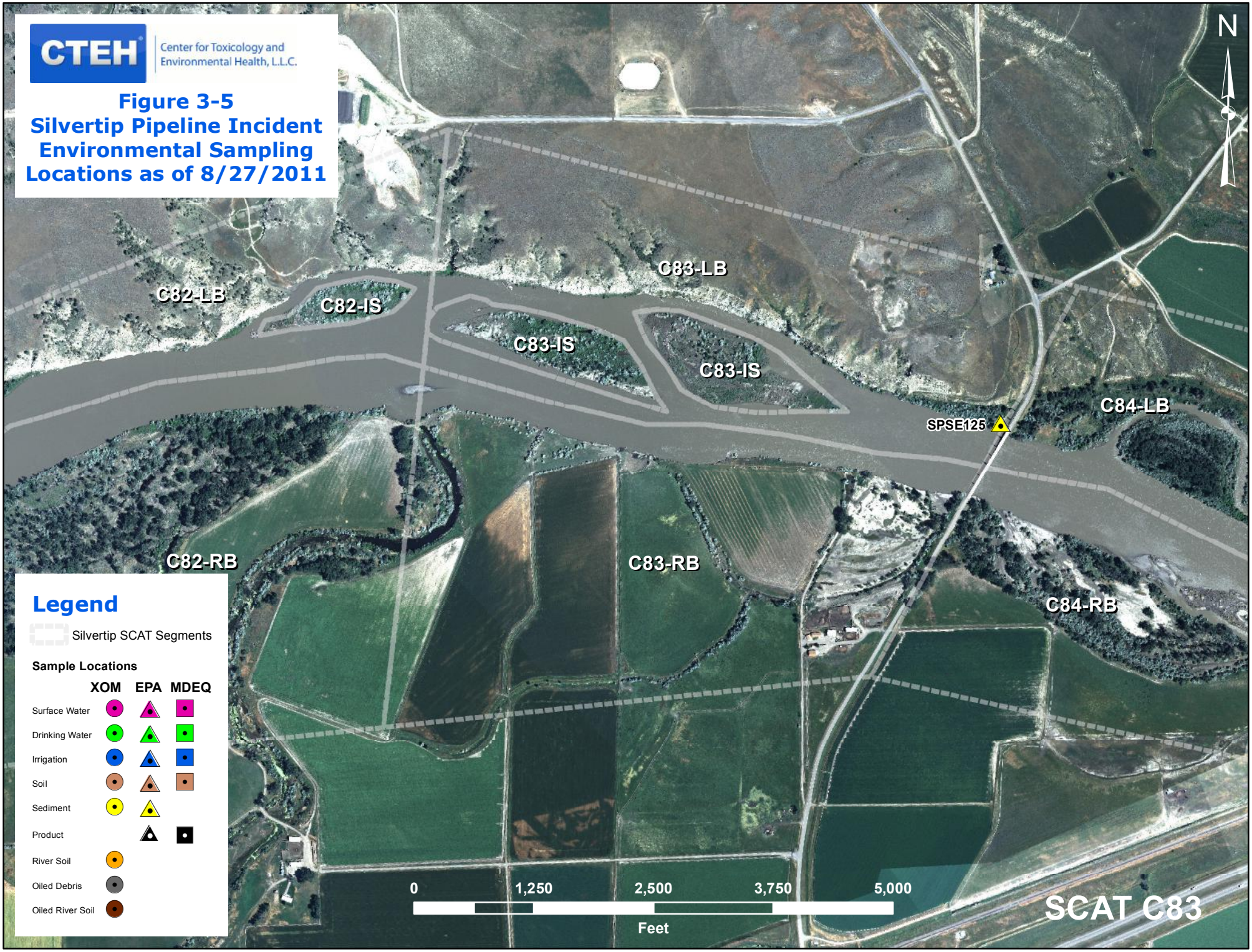
Date: 10/18/2011 Time: 11:07:58 AM

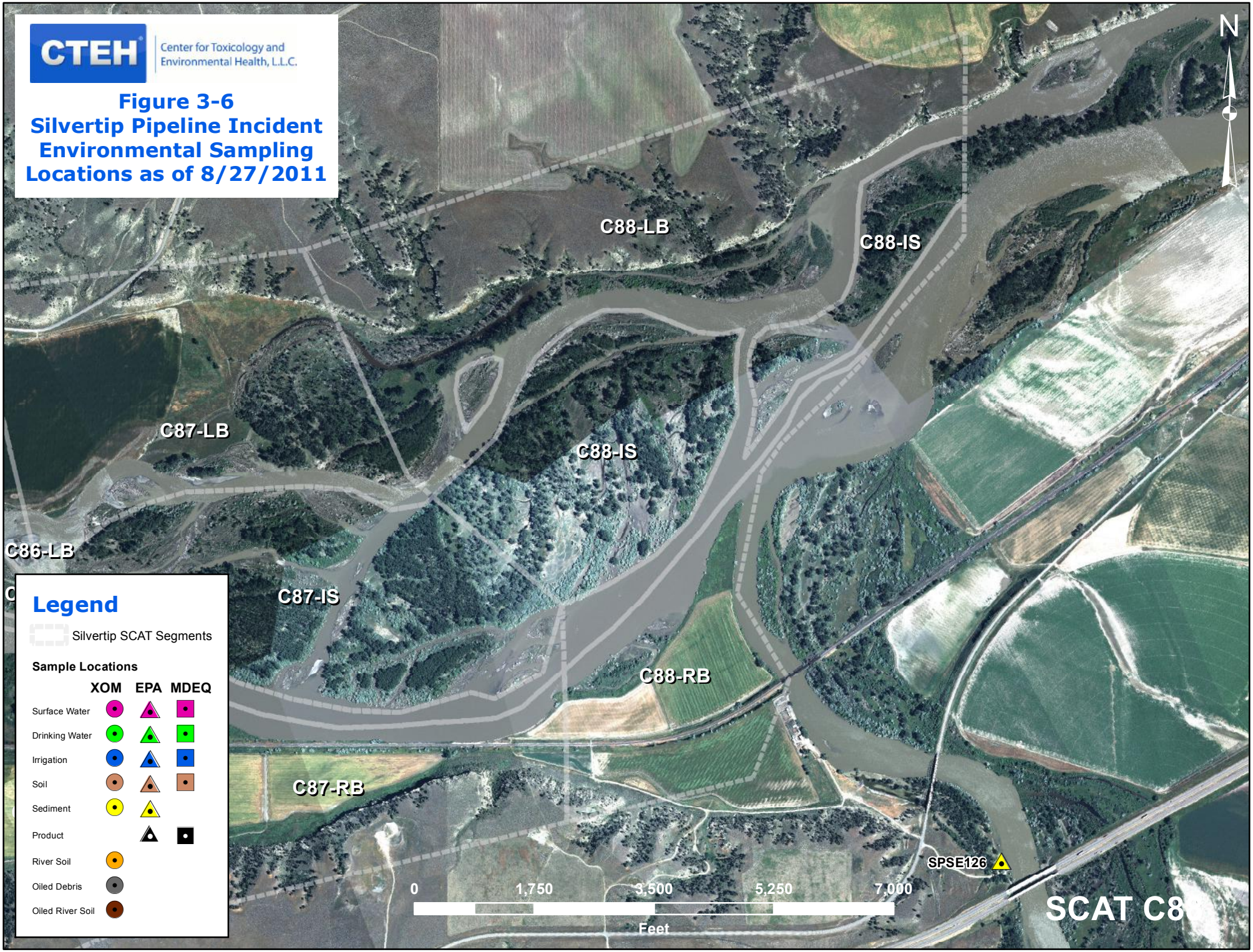
CTEH
Center for Toxicology and Environmental Health, L.L.C.
Figure 3-1
Silvertip Pipeline Incident Environmental Sampling Locations as of 8/27/2011
3
C57-LB
C57-IS
C57-RB
C56-LB
C55-LB
C56-IS
C55-IS
C56-IS
C56-RB
WOMT_418_SW201
PPMT_512_DW301
Legend
Silvertip SCAT Segments
Sample Locations
XOM
EPA
MDEQ
Surface Water
Drinking Water
Irrigation
Soil
Sediment
Product
River Soil
Oiled Debris
Oiled River Soil
0
1,500
3,000
4,500
6,000
Feet
SCAT C56


CTEH
Center for Toxicology and Environmental Health, L.L.C.
Figure 3-2
Silvertip Pipeline Incident
Environmental Sampling
Locations as of 8/27/2011
3
C70-LB
PPMT_SW201
PPMT_SW202
C70-RB
C69-LB
C69-IS
C69-IS
C69-RB
C68-IS
C68-RB
0
1,250
2,500
3,750
5,000
Feet
SCAT C69
Legend
Silvertip SCAT Segments
Sample Locations
XOM
EPA
MDEQ
Surface Water
Drinking Water
Irrigation
Soil
Sediment
Product
River Soil
Oiled Debris
Oiled River Soil


CTEH
Center for Toxicology and Environmental Health, L.L.C.
Figure 3-3
Silvertip Pipeline Incident Environmental Sampling Locations as of 8/27/2011
N
C74-LB
C73-LB
C74-IS
C73-IS
C74-IS
C74-IS
SPSE124
C72-LB
C74-RB
C73-RB
C72-RB
Legend
Silvertip SCAT Segments
Sample Locations
XOM EPA MDEQ
Surface Water
Drinking Water
Irrigation
Soil
Sediment
Product
River Soil
Oiled Debris
Oiled River Soil
0 1,500 3,000 4,500 6,000
Feet
SCAT C73


CTEH
Center for Toxicology and Environmental Health, L.L.C.
Figure 3-4
Silvertip Pipeline Incident Environmental Sampling Locations as of 8/27/2011
N
C79-LB
C77-LB
C78-LB
C77-IS
C79-IS
C78-IS
C79-RB
SPSW504
C78
C78-RB
Legend
Silvertip SCAT Segments
Sample Locations
XOM
EPA
MDEQ
Surface Water
Drinking Water
Irrigation
Soil
Sediment
Product
River Soil
Oiled Debris
Oiled River Soil
0
1,500
3,000
4,500
6,000
Feet
SCAT C78


CTEH
Center for Toxicology and Environmental Health, L.L.C.
Figure 3-5
Silvertip Pipeline Incident
Environmental Sampling
Locations as of 8/27/2011
N
C82-LB
C82-IS
C83-LB
C83-IS
C83-IS
C84-LB
SPSE125
C82-RB
C83-RB
C84-RB
Legend
Silvertip SCAT Segments
Sample Locations
XOM
EPA
MDEQ
Surface Water
Drinking Water
Irrigation
Soil
Sediment
Product
River Soil
Oiled Debris
Oiled River Soil
0
1,250
2,500
3,750
5,000
Feet
SCAT C83


CTEH
Center for Toxicology and Environmental Health, L.L.C.
Figure 3-6
Silvertip Pipeline Incident
Environmental Sampling
Locations as of 8/27/2011
N
C88-LB
C88-IS
C87-LB
C88-IS
C86-LB
C87-IS
C88-RB
C87-RB
SPSE126
0
1,750
3,500
5,250
7,000
Feet
SCAT C8
Legend
Silvertip SCAT Segments
Sample Locations
XOM
EPA
MDEQ
Surface Water
Drinking Water
Irrigation
Soil
Sediment
Product
River Soil
Oiled Debris
Oiled River Soil

9999 Oiling Zone ID
Heavy Oiling
Moderate Oiling
Light Oiling
Very Light Oiling
No Oil Observed

670 0 670 1,340 Feet

**Figure 4-1 Maximum SCAT Observations For SCAT Area: C56**

POLARIS APPLIED SCIENCES, INC.

Aerial Photography Dated July 20, 2011

O:\GIS\SCAT Mapping\Maps\Area Transition Reports MXD\ATR Fig 4 - Max_SCAT_Observations_DataPages.mxd

Printed: 10/24/2011 11:55:19 AM

9999 Oiling Zone ID
Heavy Oiling
Moderate Oiling
Light Oiling
Very Light Oiling
No Oil Observed

650 0 650 1,300 Feet

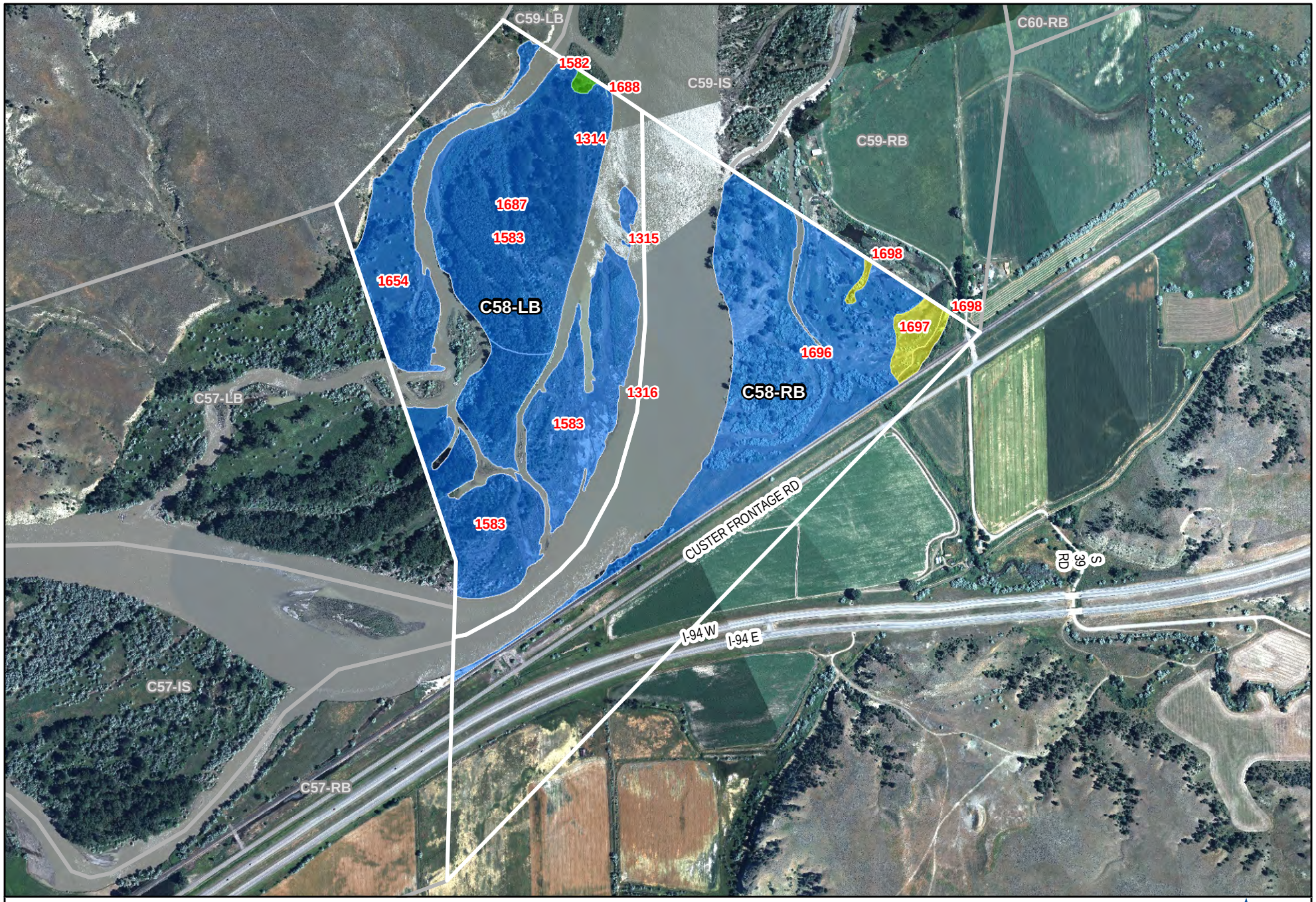
**Figure 4-2 Maximum SCAT Observations For SCAT Area: C57**

POLARIS APPLIED SCIENCES, INC.

Aerial Photography Dated July 20, 2011

O:\GIS\SCAT Mapping\Maps\Area Transition Reports MXD\ATR Fig 4 - Max_SCAT_Observations_DataPages.mxd

Printed: 10/24/2011 5:39:53 PM




9999 Oiling Zone ID
Heavy Oiling
Moderate Oiling
Light Oiling
Very Light Oiling
No Oil Observed

675 0 675 1,350 Feet

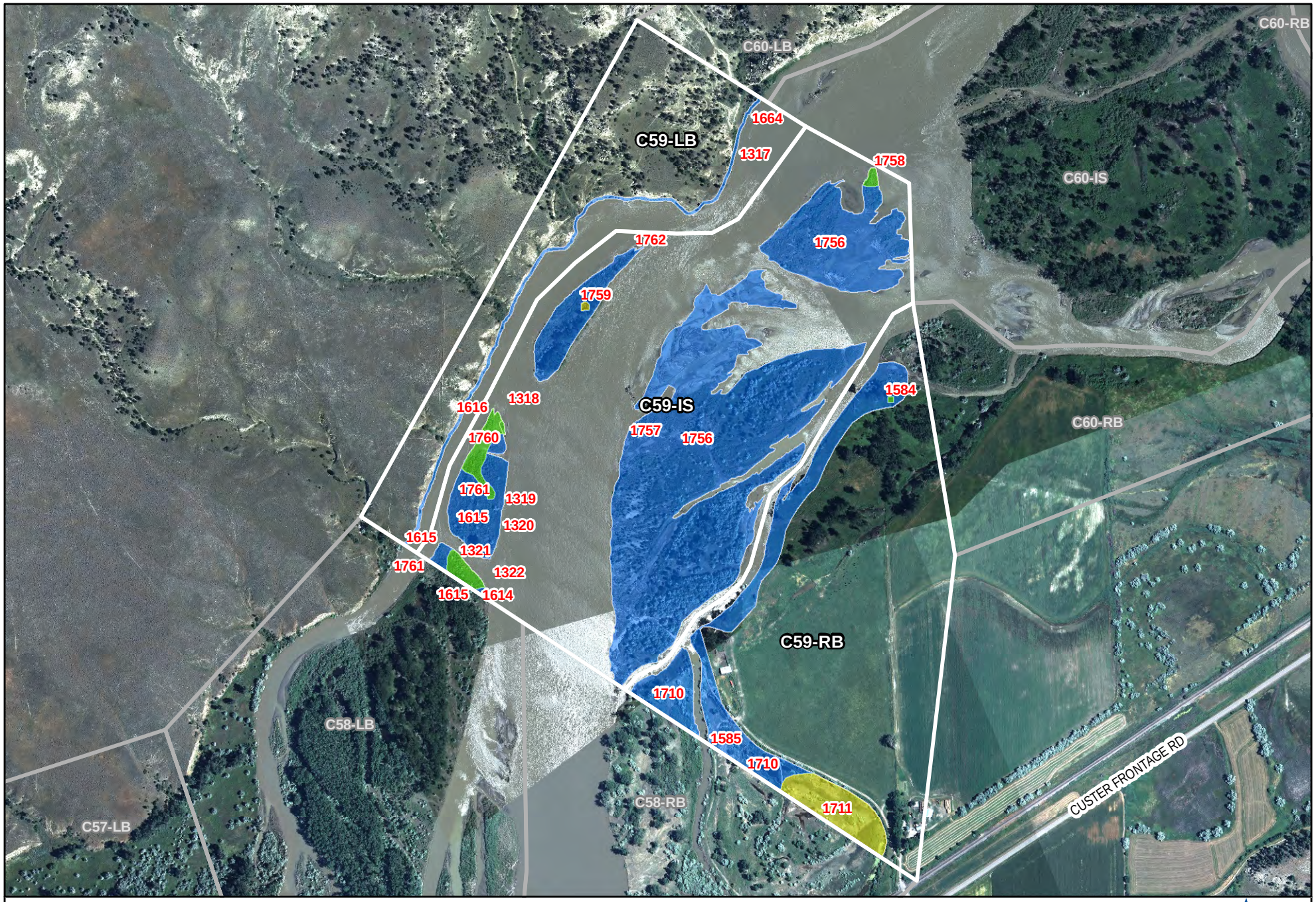
**Figure 4-3 Maximum SCAT Observations For SCAT Area: C58**

POLARIS APPLIED SCIENCES, INC.

Aerial Photography Dated July 20, 2011

O:\GIS\SCAT Mapping\Maps\Area Transition Reports MXD\ATR Fig 4 - Max_SCAT_Observations_DataPages.mxd

Printed: 10/25/2011 9:26:38 AM




9999 Oiling Zone ID
Heavy Oiling
Moderate Oiling
Light Oiling
Very Light Oiling
No Oil Observed

580 0 580 1,160 Feet

**Figure 4-4 Maximum SCAT Observations For SCAT Area: C59**

POLARIS APPLIED SCIENCES, INC.

Aerial Photography Dated July 20, 2011

O:\GIS\SCAT Mapping\Maps\Area Transition Reports MXD\ATR Fig 4 - Max_SCAT_Observations_DataPages.mxd

Printed: 10/25/2011 10:47:13 AM

9999 Oiling Zone ID
Heavy Oiling
Moderate Oiling
Light Oiling
Very Light Oiling
No Oil Observed

690 0 690 1,380 Feet

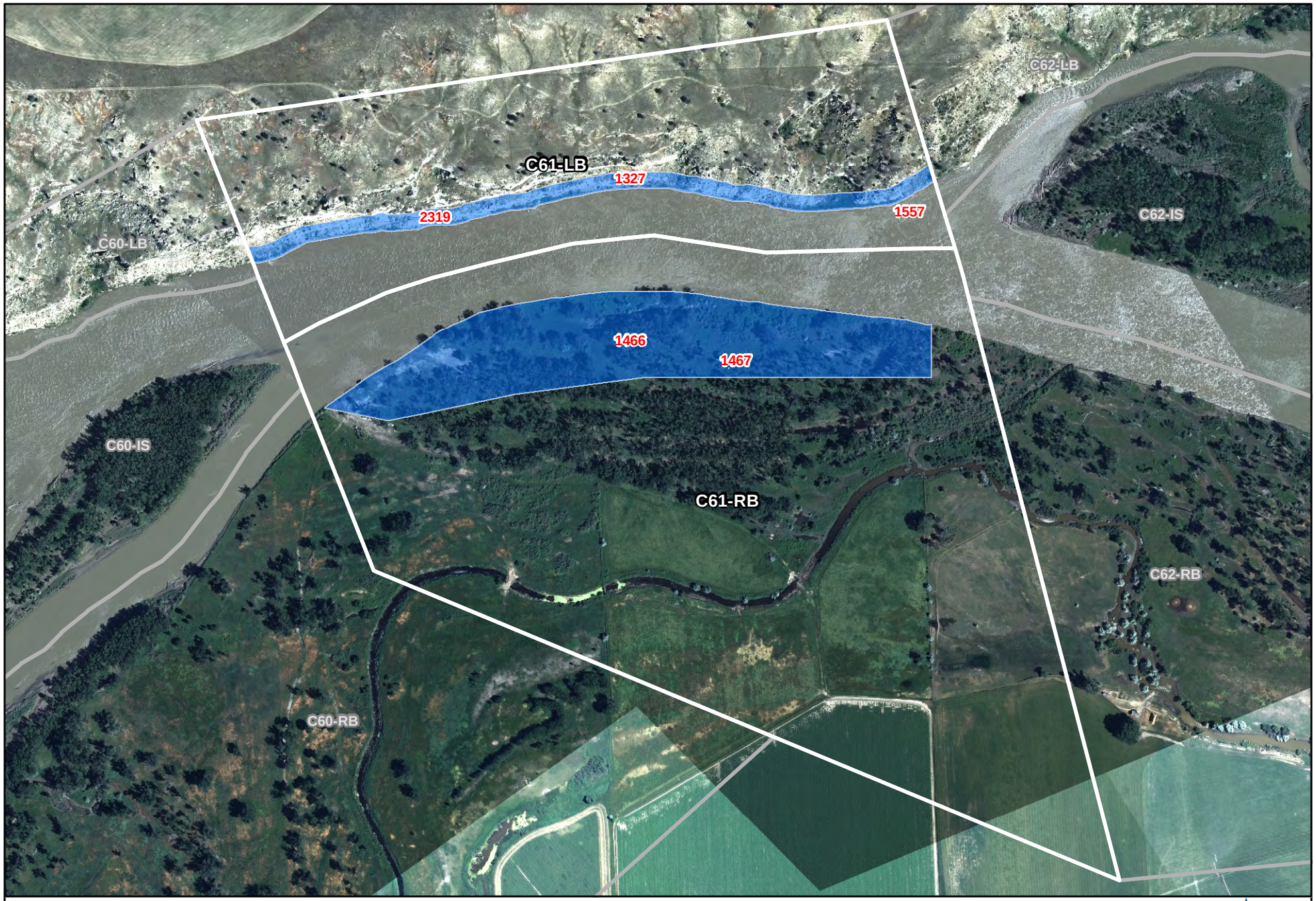
**Figure 4-5 Maximum SCAT Observations For SCAT Area: C60**

POLARIS APPLIED SCIENCES, INC.

Aerial Photography Dated July 20, 2011

O:\GIS\SCAT Mapping\Maps\Area Transition Reports MXD\ATR Fig 4 - Max_SCAT_Observations_DataPages.mxd

Printed: 10/25/2011 11:35:07 AM




9999 Oiling Zone ID
Heavy Oiling
Moderate Oiling
Light Oiling
Very Light Oiling
No Oil Observed

410 0 410 820 Feet

**Figure 4-6 Maximum SCAT Observations For SCAT Area: C61**

POLARIS APPLIED SCIENCES, INC.

Aerial Photography Dated July 20, 2011

O:\GIS\SCAT Mapping\Maps\Area Transition Reports MXD\ATR Fig 4 - Max_SCAT_Observations_DataPages.mxd

Printed: 10/25/2011 12:38:19 PM

9999 Oiling Zone ID
Heavy Oiling
Moderate Oiling
Light Oiling
Very Light Oiling
No Oil Observed

570 0 570 1,140 Feet

**Figure 4-7 Maximum SCAT Observations For SCAT Area: C62**

POLARIS APPLIED SCIENCES, INC.

Aerial Photography Dated July 20, 2011

O:\GIS\SCAT Mapping\Maps\Area Transition Reports MXD\ATR Fig 4 - Max_SCAT_Observations_DataPages.mxd

Printed: 10/11/2011 4:26:56 PM

9999 Oiling Zone ID
Heavy Oiling
Moderate Oiling
Light Oiling
Very Light Oiling
No Oil Observed

600 0 600 1,200 Feet

**Figure 4-8 Maximum SCAT Observations For SCAT Area: C63**

POLARIS APPLIED SCIENCES, INC.

Aerial Photography Dated July 20, 2011

O:\GIS\SCAT Mapping\Maps\Area Transition Reports MXD\ATR Fig 4 - Max_SCAT_Observations_DataPages.mxd

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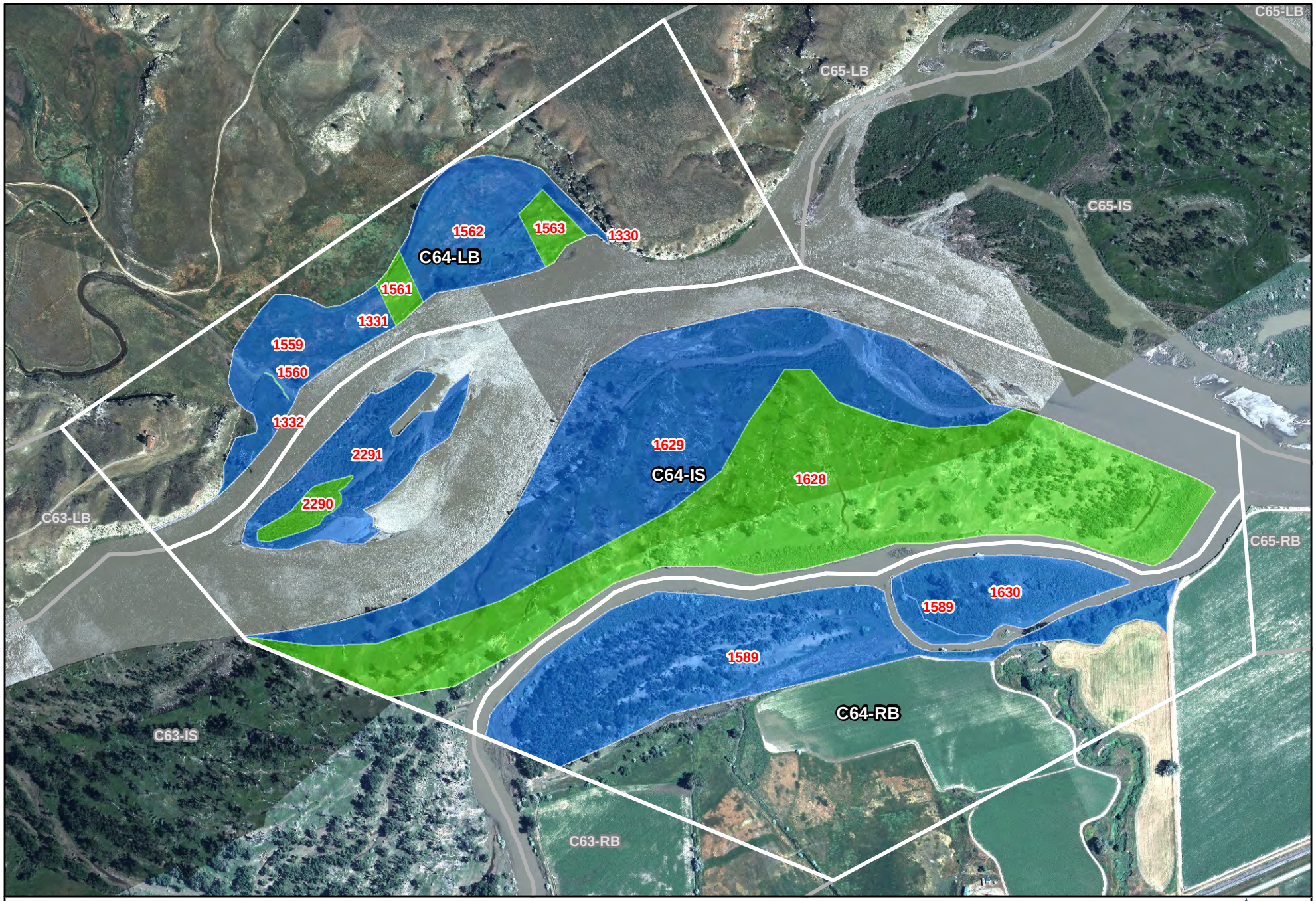



9999 Oiling Zone ID
Heavy Oiling
Moderate Oiling
Light Oiling
Very Light Oiling
No Oil Observed

550 0 550 1,100 Feet

**Figure 4-9 Maximum SCAT Observations For SCAT Area: C64**

POLARIS APPLIED SCIENCES, INC.

Aerial Photography Dated July 20, 2011

O:\GIS\SCAT Mapping\Maps\Area Transition Reports MXD\ATR Fig 4 - Max_SCAT_Observations_DataPages.mxd

Printed: 10/25/2011 2:27:22 PM

9999 Oiling Zone ID
Heavy Oiling
Moderate Oiling
Light Oiling
Very Light Oiling
No Oil Observed

560 0 560 1,120 Feet

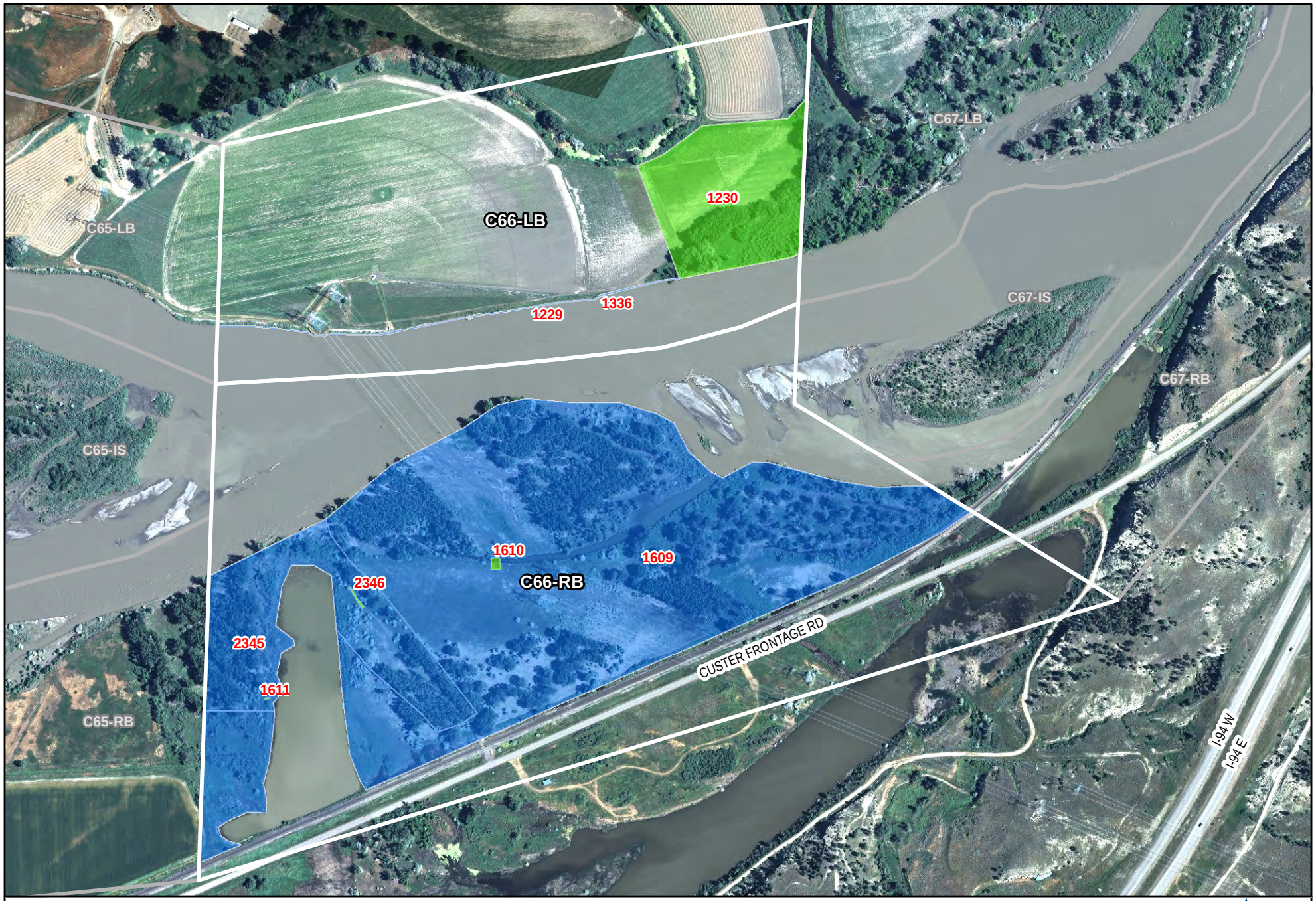
**Figure 4-10 Maximum SCAT Observations For SCAT Area: C65**

POLARIS APPLIED SCIENCES, INC.

Aerial Photography Dated July 20, 2011

O:\GIS\SCAT Mapping\Maps\Area Transition Reports MXD\ATR Fig 4 - Max_SCAT_Observations_DataPages.mxd

Printed: 10/25/2011 2:48:10 PM




9999 Oiling Zone ID
Heavy Oiling
Moderate Oiling
Light Oiling
Very Light Oiling
No Oil Observed

450 0 450 900 Feet

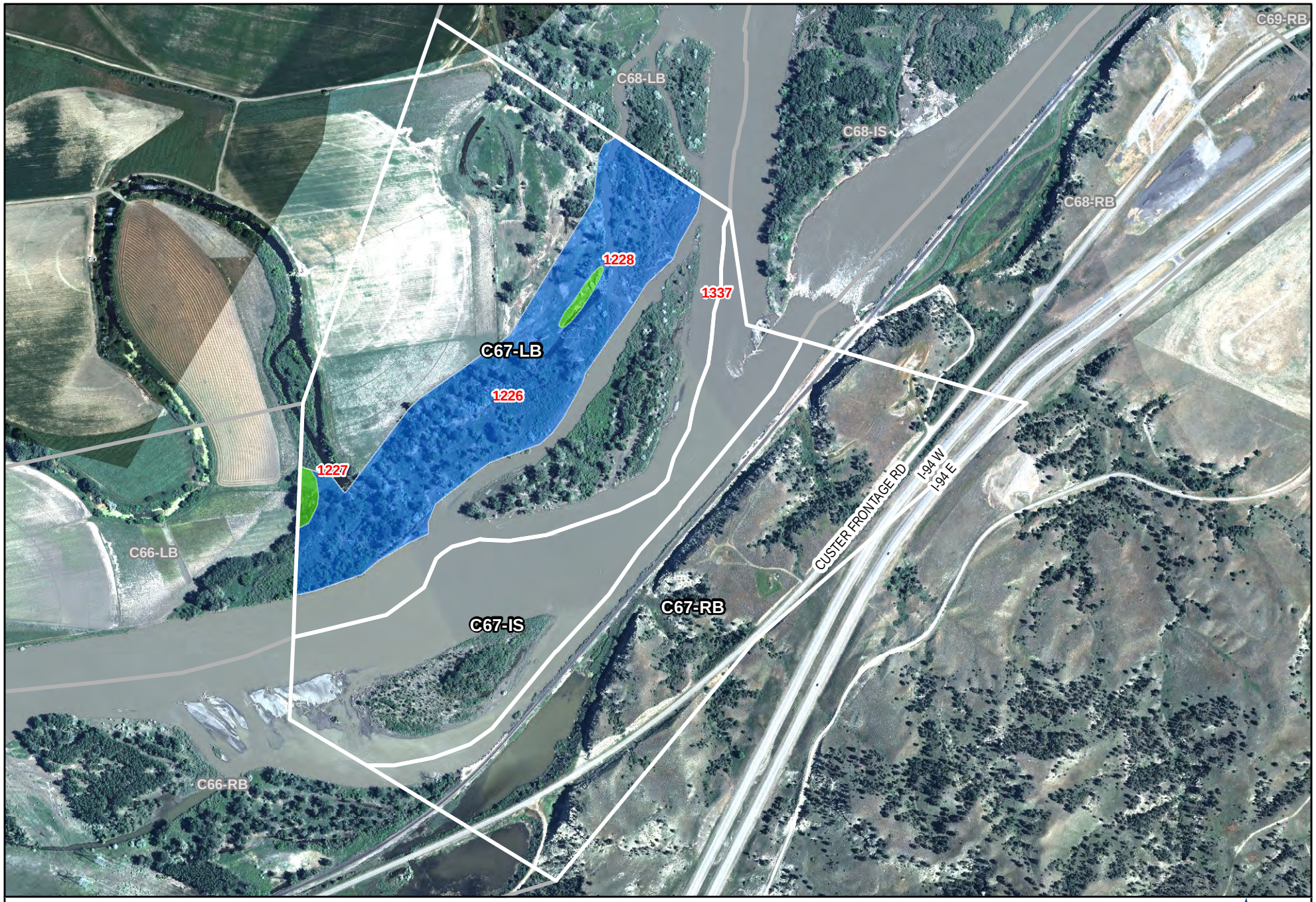
**Figure 4-11 Maximum SCAT Observations For SCAT Area: C66**

POLARIS APPLIED SCIENCES, INC.

Aerial Photography Dated July 20, 2011

O:\GIS\SCAT Mapping\Maps\Area Transition Reports MXD\ATR Fig 4 - Max_SCAT_Observations_DataPages.mxd

Printed: 10/25/2011 3:16:09 PM




9999 Oiling Zone ID
Heavy Oiling
Moderate Oiling
Light Oiling
Very Light Oiling
No Oil Observed

540 0 540 1,080 Feet

**Figure 4-12 Maximum SCAT Observations For SCAT Area: C67**

POLARIS APPLIED SCIENCES, INC.

Aerial Photography Dated July 20, 2011

O:\GIS\SCAT Mapping\Maps\Area Transition Reports MXD\ATR Fig 4 - Max_SCAT_Observations_DataPages.mxd

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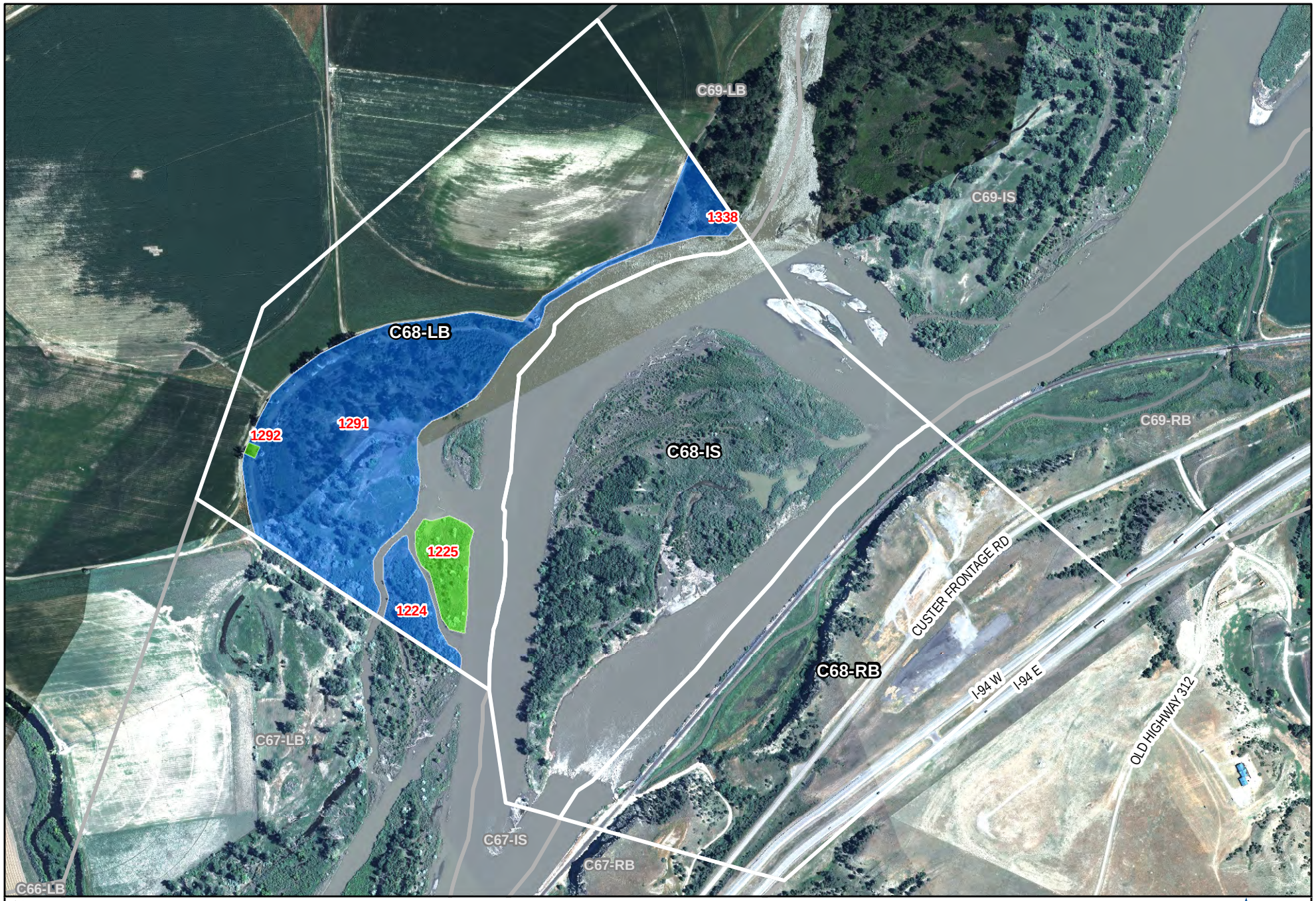



9999 Oiling Zone ID
Heavy Oiling
Moderate Oiling
Light Oiling
Very Light Oiling
No Oil Observed

540 0 540 1,080 Feet

**Figure 4-13 Maximum SCAT Observations For SCAT Area: C68**

POLARIS APPLIED SCIENCES, INC.

Aerial Photography Dated July 20, 2011

O:\GIS\SCAT Mapping\Maps\Area Transition Reports MXD\ATR Fig 4 - Max_SCAT_Observations_DataPages.mxd

Printed: 10/24/2011 4:59:00 PM

9999 Oiling Zone ID
Heavy Oiling
Moderate Oiling
Light Oiling
Very Light Oiling
No Oil Observed

710 0 710 1,420 Feet

**Figure 4-14 Maximum SCAT Observations For SCAT Area: C69**

POLARIS APPLIED SCIENCES, INC.

Aerial Photography Dated July 20, 2011

O:\GIS\SCAT Mapping\Maps\Area Transition Reports MXD\ATR Fig 4 - Max_SCAT_Observations_DataPages.mxd

Printed: 10/24/2011 5:02:07 PM

9999 Oiling Zone ID
Heavy Oiling
Moderate Oiling
Light Oiling
Very Light Oiling
No Oil Observed

670 0 670 1,340 Feet

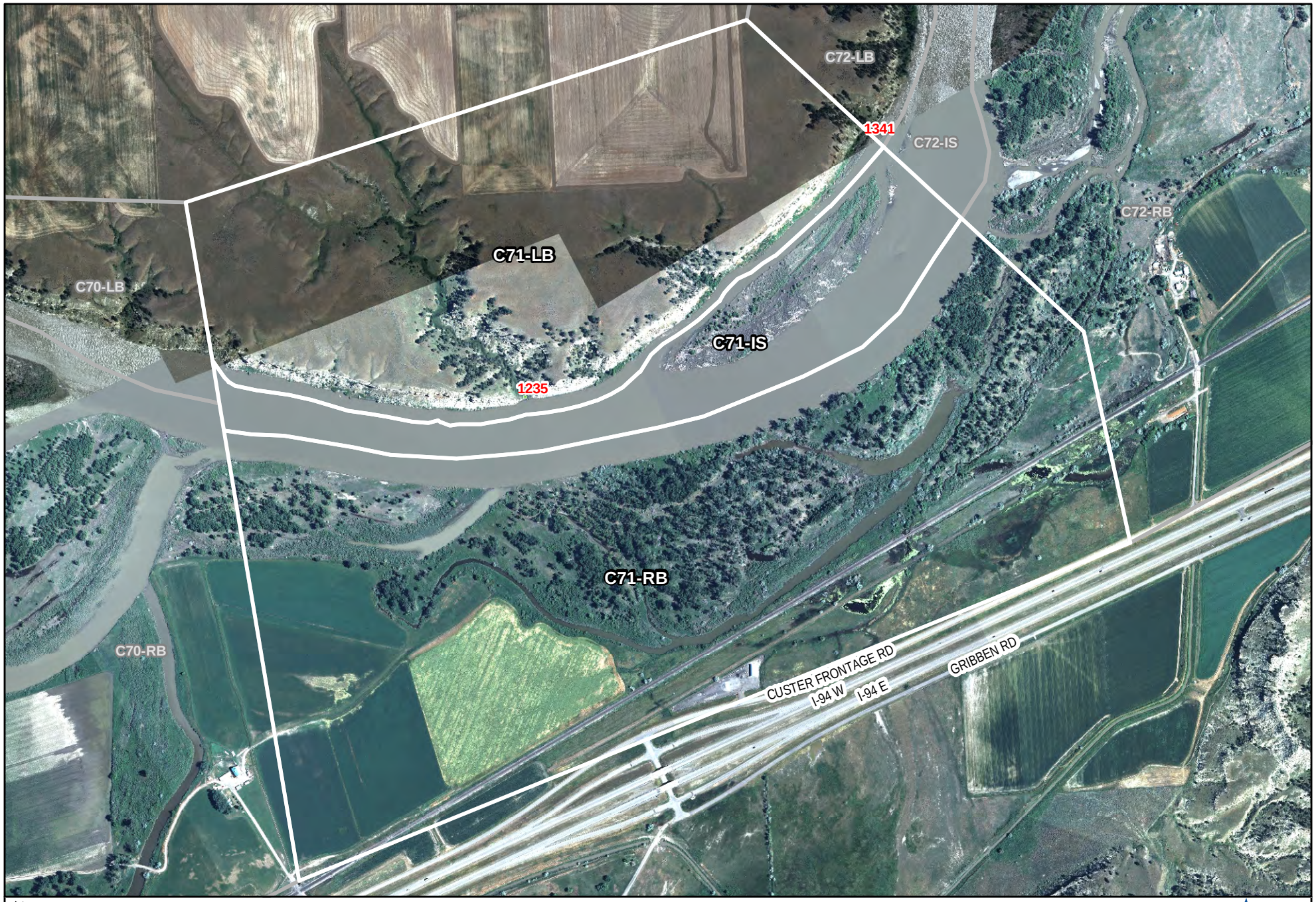
**Figure 4-15 Maximum SCAT Observations For SCAT Area: C70**

POLARIS APPLIED SCIENCES, INC.

Aerial Photography Dated July 20, 2011

S:\GIS\SCAT Mapping\Maps\Area Transition Reports MXD\ATR Fig 4 - Max_SCAT_Observations_DataPages.mxd

Printed: 9/22/2011 8:34:52 PM




9999 Oiling Zone ID
Heavy Oiling
Moderate Oiling
Light Oiling
Very Light Oiling
No Oil Observed

670 0 670 1,340 Feet

**Figure 4-16 Maximum SCAT Observations For SCAT Area: C71**

POLARIS APPLIED SCIENCES, INC.

Aerial Photography Dated July 20, 2011

O:\GIS\SCAT Mapping\Maps\Area Transition Reports MXD\ATR Fig 4 - Max_SCAT_Observations_DataPages.mxd

Printed: 10/24/2011 5:08:21 PM

9999 Oiling Zone ID
Heavy Oiling
Moderate Oiling
Light Oiling
Very Light Oiling
No Oil Observed

950 0 950 1,900 Feet

**Figure 4-17 Maximum SCAT Observations For SCAT Area: C72**

POLARIS APPLIED SCIENCES, INC.

Aerial Photography Dated July 20, 2011

O:\GIS\SCAT Mapping\Maps\Area Transition Reports MXD\ATR Fig 4 - Max_SCAT_Observations_DataPages.mxd

Printed: 10/24/2011 5:10:16 PM

9999 Oiling Zone ID
Heavy Oiling
Moderate Oiling
Light Oiling
Very Light Oiling
No Oil Observed

870 0 870 1,740 Feet

**Figure 4-18 Maximum SCAT Observations For SCAT Area: C73**

POLARIS APPLIED SCIENCES, INC.

Aerial Photography Dated July 20, 2011

O:\GIS\SCAT Mapping\Maps\Area Transition Reports MXD\ATR Fig 4 - Max_SCAT_Observations_DataPages.mxd

Printed: 10/24/2011 5:12:04 PM

9999 Oiling Zone ID
Heavy Oiling
Moderate Oiling
Light Oiling
Very Light Oiling
No Oil Observed

720 0 720 1,440 Feet

**Figure 4-19 Maximum SCAT Observations For SCAT Area: C74**

POLARIS APPLIED SCIENCES, INC.

Aerial Photography Dated July 20, 2011

O:\GIS\SCAT Mapping\Maps\Area Transition Reports MXD\ATR Fig 4 - Max_SCAT_Observations_DataPages.mxd

Printed: 10/24/2011 5:17:57 PM

9999 Oiling Zone ID
Heavy Oiling
Moderate Oiling
Light Oiling
Very Light Oiling
No Oil Observed

790 0 790 1,580 Feet

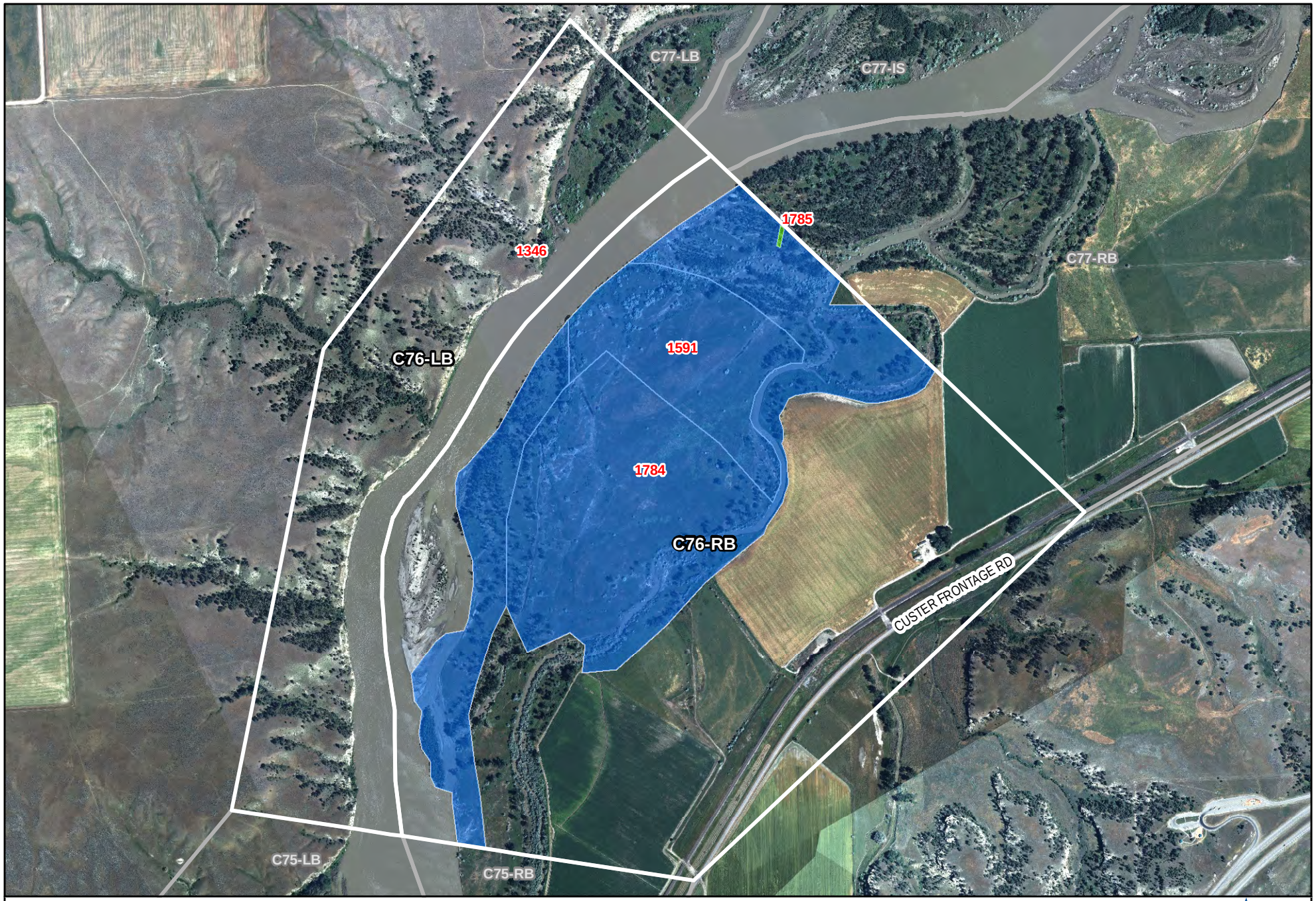
**Figure 4-20 Maximum SCAT Observations For SCAT Area: C75**

POLARIS APPLIED SCIENCES, INC.

Aerial Photography Dated July 20, 2011

O:\GIS\SCAT Mapping\Maps\Area Transition Reports MXD\ATR Fig 4 - Max_SCAT_Observations_DataPages.mxd

Printed: 10/24/2011 5:20:38 PM




9999 Oiling Zone ID
Heavy Oiling
Moderate Oiling
Light Oiling
Very Light Oiling
No Oil Observed

860 0 860 1,720 Feet

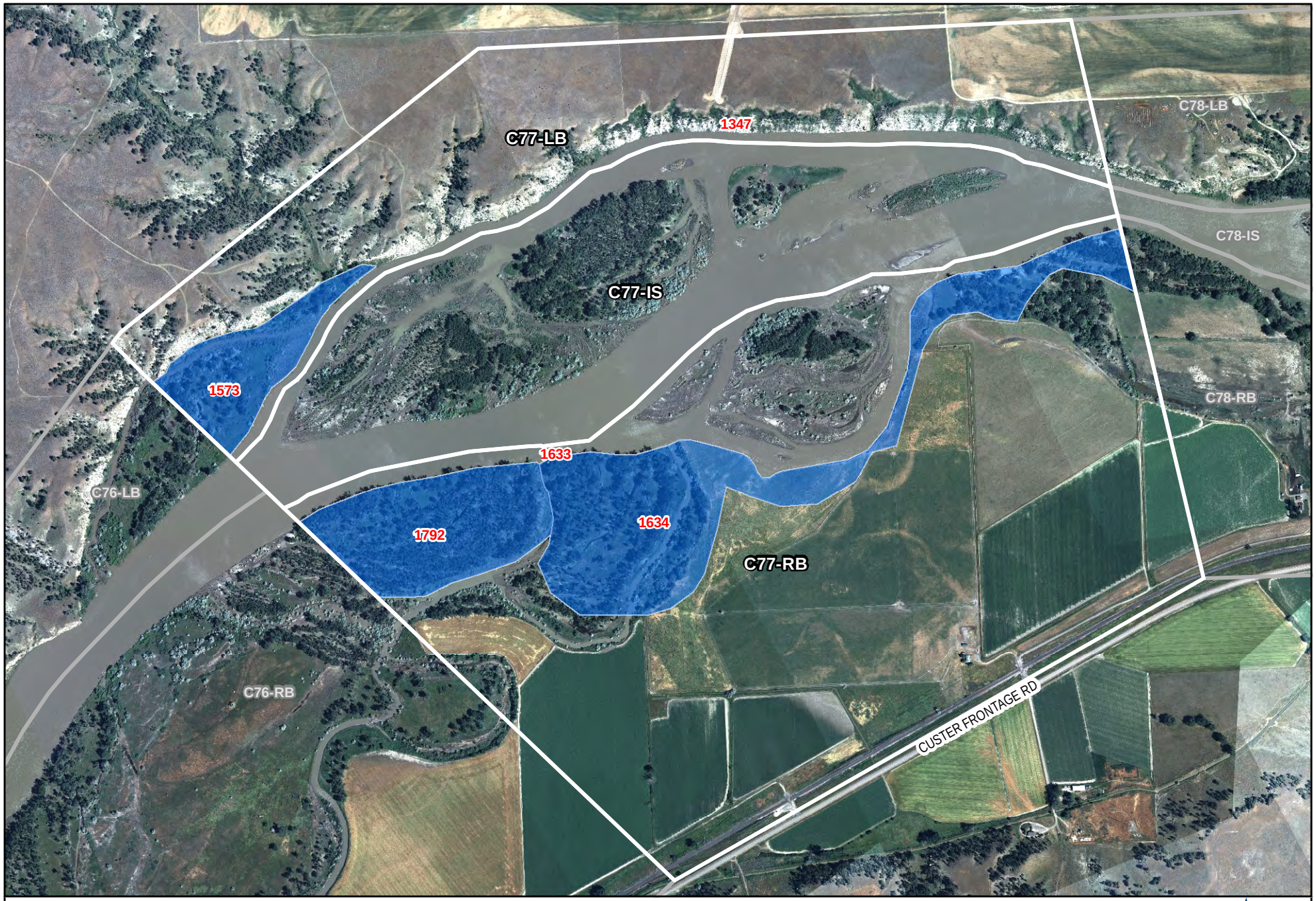
**Figure 4-21 Maximum SCAT Observations For SCAT Area: C76**

POLARIS APPLIED SCIENCES, INC.

Aerial Photography Dated July 20, 2011

O:\GIS\SCAT Mapping\Maps\Area Transition Reports MXD\ATR Fig 4 - Max_SCAT_Observations_DataPages.mxd

Printed: 10/26/2011 10:15:09 AM




9999 Oiling Zone ID
Heavy Oiling
Moderate Oiling
Light Oiling
Very Light Oiling
No Oil Observed

790 0 790 1,580 Feet

**Figure 4-22 Maximum SCAT Observations For SCAT Area: C77**

POLARIS APPLIED SCIENCES, INC.

Aerial Photography Dated July 20, 2011

O:\GIS\SCAT Mapping\Maps\Area Transition Reports MXD\ATR Fig 4 - Max_SCAT_Observations_DataPages.mxd

Printed: 10/26/2011 12:10:30 PM

9999 Oiling Zone ID
Heavy Oiling
Moderate Oiling
Light Oiling
Very Light Oiling
No Oil Observed

620 0 620 1,240 Feet

**Figure 4-23 Maximum SCAT Observations For SCAT Area: C78**

POLARIS APPLIED SCIENCES, INC.

Aerial Photography Dated July 20, 2011

O:\GIS\SCAT Mapping\Maps\Area Transition Reports MXD\ATR Fig 4 - Max_SCAT_Observations_DataPages.mxd

Printed: 10/22/2011 5:44:04 PM

9999 Oiling Zone ID
Heavy Oiling
Moderate Oiling
Light Oiling
Very Light Oiling
No Oil Observed

690 0 690 1,380 Feet

**Figure 4-24 Maximum SCAT Observations For SCAT Area: C79**

POLARIS APPLIED SCIENCES, INC.

Aerial Photography Dated July 20, 2011

O:\GIS\SCAT Mapping\Maps\Area Transition Reports MXD\ATR Fig 4 - Max_SCAT_Observations_DataPages.mxd

Printed: 10/21/2011 6:23:43 PM

9999 Oiling Zone ID
Heavy Oiling
Moderate Oiling
Light Oiling
Very Light Oiling
No Oil Observed

750 0 750 1,500 Feet

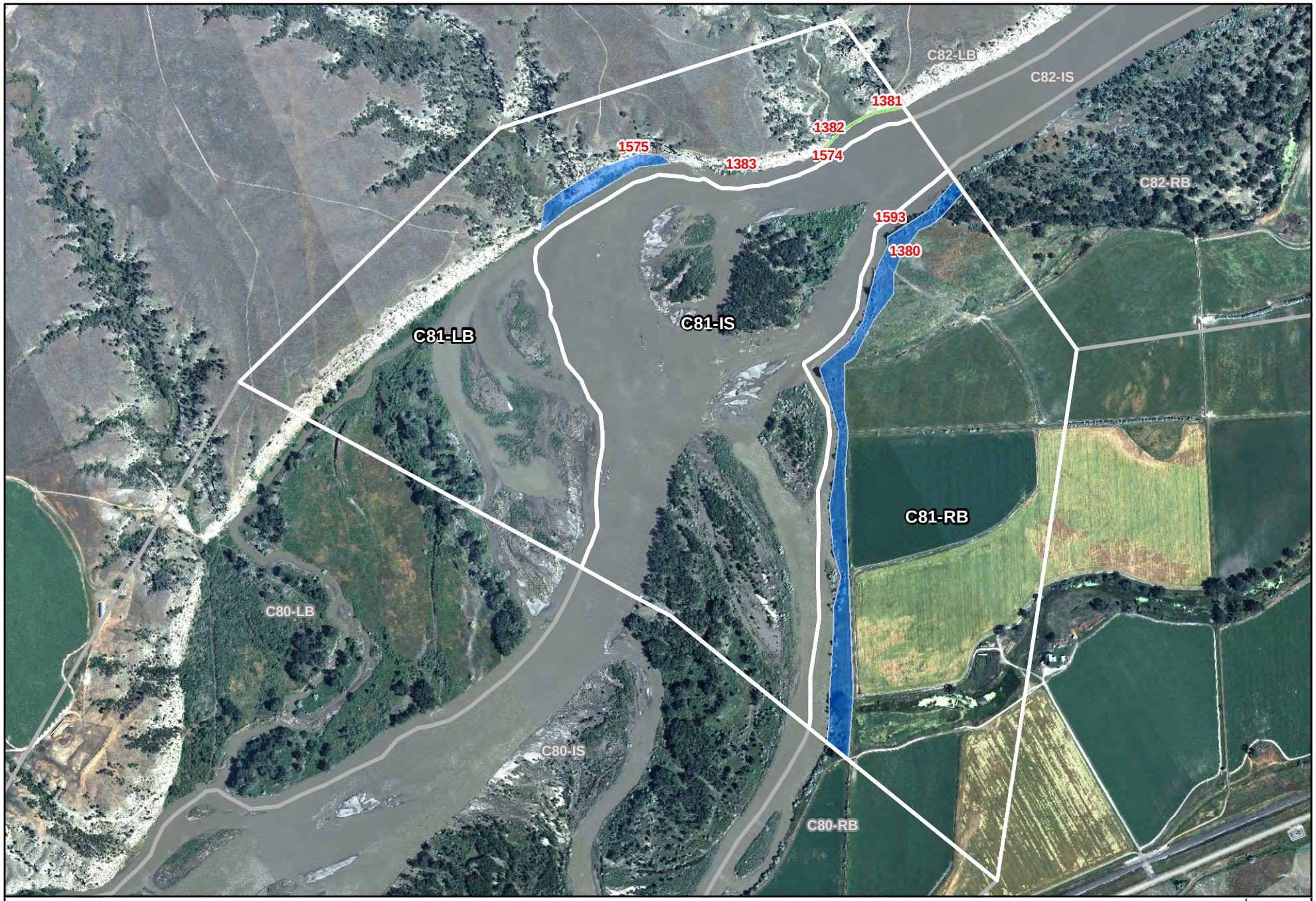
**Figure 4-25 Maximum SCAT Observations For SCAT Area: C80**

POLARIS APPLIED SCIENCES, INC.

Aerial Photography Dated July 20, 2011

O:\GIS\SCAT Mapping\Maps\Area Transition Reports MXD\ATR Fig 4 - Max_SCAT_Observations_DataPages.mxd

Printed: 10/21/2011 6:25:04 PM




9999 Oiling Zone ID
Heavy Oiling
Moderate Oiling
Light Oiling
Very Light Oiling
No Oil Observed

720 0 720 1,440 Feet

**Figure 4-26 Maximum SCAT Observations For SCAT Area: C81**

POLARIS APPLIED SCIENCES, INC.

Aerial Photography Dated July 20, 2011

O:\GIS\SCAT Mapping\Maps\Area Transition Reports MXD\ATR Fig 4 - Max_SCAT_Observations_DataPages.mxd

Printed: 10/20/2011 3:34:13 PM

9999 Oiling Zone ID
Heavy Oiling
Moderate Oiling
Light Oiling
Very Light Oiling
No Oil Observed

560 0 560 1,120 Feet

**Figure 4-27 Maximum SCAT Observations For SCAT Area: C82**

POLARIS APPLIED SCIENCES, INC.

Aerial Photography Dated July 20, 2011

O:\GIS\SCAT Mapping\Maps\Area Transition Reports MXD\ATR Fig 4 - Max_SCAT_Observations_DataPages.mxd

Printed: 10/19/2011 7:52:22 PM

9999 Oiling Zone ID
Heavy Oiling
Moderate Oiling
Light Oiling
Very Light Oiling
No Oil Observed

510 0 510 1,020 Feet

**Figure 4-28 Maximum SCAT Observations For SCAT Area: C83**

POLARIS APPLIED SCIENCES, INC.

Aerial Photography Dated July 20, 2011

O:\GIS\SCAT Mapping\Maps\Area Transition Reports MXD\ATR Fig 4 - Max_SCAT_Observations_DataPages.mxd

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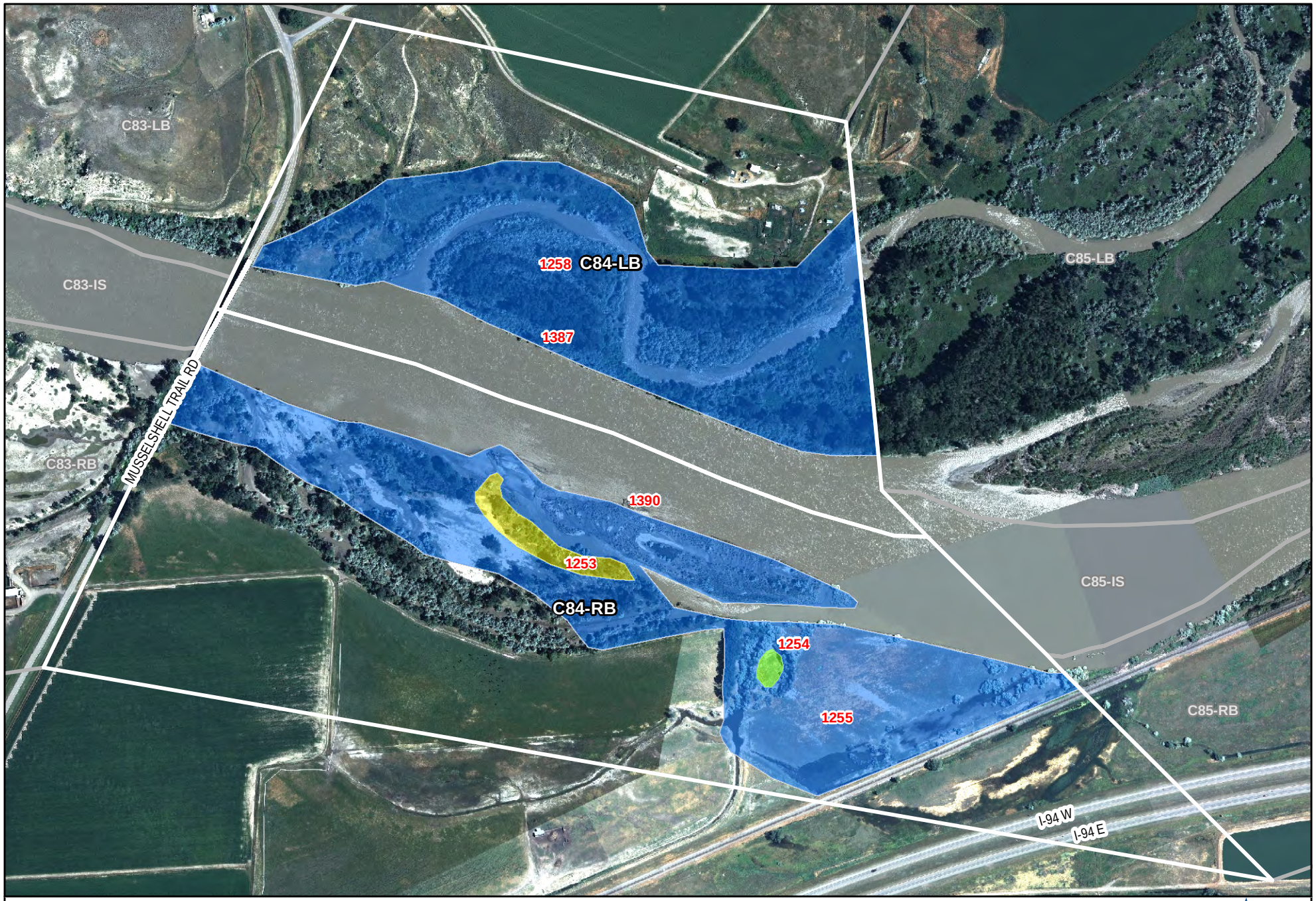



9999 Oiling Zone ID
Heavy Oiling
Moderate Oiling
Light Oiling
Very Light Oiling
No Oil Observed

450 0 450 900 Feet

**Figure 4-29 Maximum SCAT Observations For SCAT Area: C84**

POLARIS APPLIED SCIENCES, INC.

Aerial Photography Dated July 20, 2011

O:\GIS\SCAT Mapping\Maps\Area Transition Reports MXD\ATR Fig 4 - Max_SCAT_Observations_DataPages.mxd

Printed: 10/7/2011 7:23:56 AM

9999 Oiling Zone ID
Heavy Oiling
Moderate Oiling
Light Oiling
Very Light Oiling
No Oil Observed

840 0 840 1,680 Feet

**Figure 4-30 Maximum SCAT Observations For SCAT Area: C85**

POLARIS APPLIED SCIENCES, INC.

Aerial Photography Dated July 20, 2011

O:\GIS\SCAT Mapping\Maps\Area Transition Reports MXD\ATR Fig 4 - Max_SCAT_Observations_DataPages.mxd

Printed: 10/5/2011 5:41:15 PM

9999 Oiling Zone ID
Heavy Oiling
Moderate Oiling
Light Oiling
Very Light Oiling
No Oil Observed

970 0 970 1,940 Feet

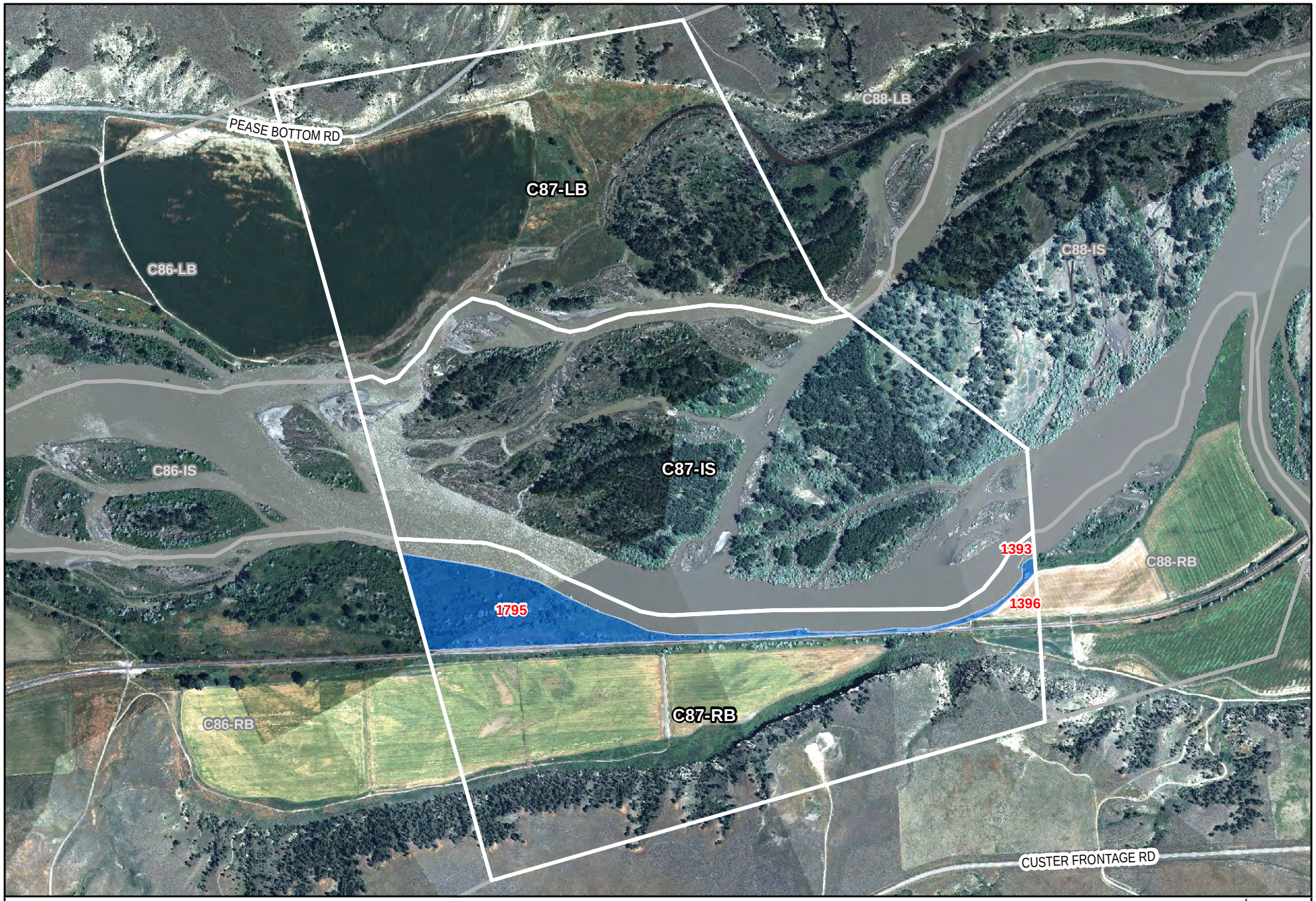
**Figure 4-31 Maximum SCAT Observations For SCAT Area: C86**

POLARIS APPLIED SCIENCES, INC.

Aerial Photography Dated July 20, 2011

O:\GIS\SCAT Mapping\Maps\Area Transition Reports MXD\ATR Fig 4 - Max_SCAT_Observations_DataPages.mxd

Printed: 10/5/2011 5:53:03 PM




N

9999 Oiling Zone ID
Heavy Oiling
Moderate Oiling
Light Oiling
Very Light Oiling
No Oil Observed

810 0 810 1,620 Feet

**Figure 4-32 Maximum SCAT Observations For SCAT Area: C87**

POLARIS APPLIED SCIENCES, INC.

Aerial Photography Dated July 20, 2011

O:\GIS\SCAT Mapping\Maps\Area Transition Reports MXD\ATR Fig 4 - Max_SCAT_Observations_DataPages.mxd

Printed: 10/5/2011 5:56:52 PM

9999 Oiling Zone ID
Heavy Oiling
Moderate Oiling
Light Oiling
Very Light Oiling
No Oil Observed

940 0 940 1,880 Feet

**Figure 4-33 Maximum SCAT Observations For SCAT Area: C88**

POLARIS APPLIED SCIENCES, INC.

Aerial Photography Dated July 20, 2011

O:\GIS\SCAT Mapping\Maps\Area Transition Reports MXD\ATR Fig 4 - Max_SCAT_Observations_DataPages.mxd

Printed: 10/5/2011 6:00:23 PM

9999 Oiling Zone ID
Heavy Oiling
Moderate Oiling
Light Oiling
Very Light Oiling
No Oil Observed

670 0 670 1,340 Feet

**Figure 5-1 Final SCAT Observations For SCAT Area: C56**

POLARIS APPLIED SCIENCES, INC.

Aerial Photography Dated July 20, 2011

O:\GIS\SCAT Mapping\Maps\Area Transition Reports MXD\ATR Fig 5 - Final_SCAT_Observations_DataPages.mxd

Printed: 10/24/2011 12:02:42 PM

9999 Oiling Zone ID
Heavy Oiling
Moderate Oiling
Light Oiling
Very Light Oiling
No Oil Observed

650 0 650 1,300 Feet

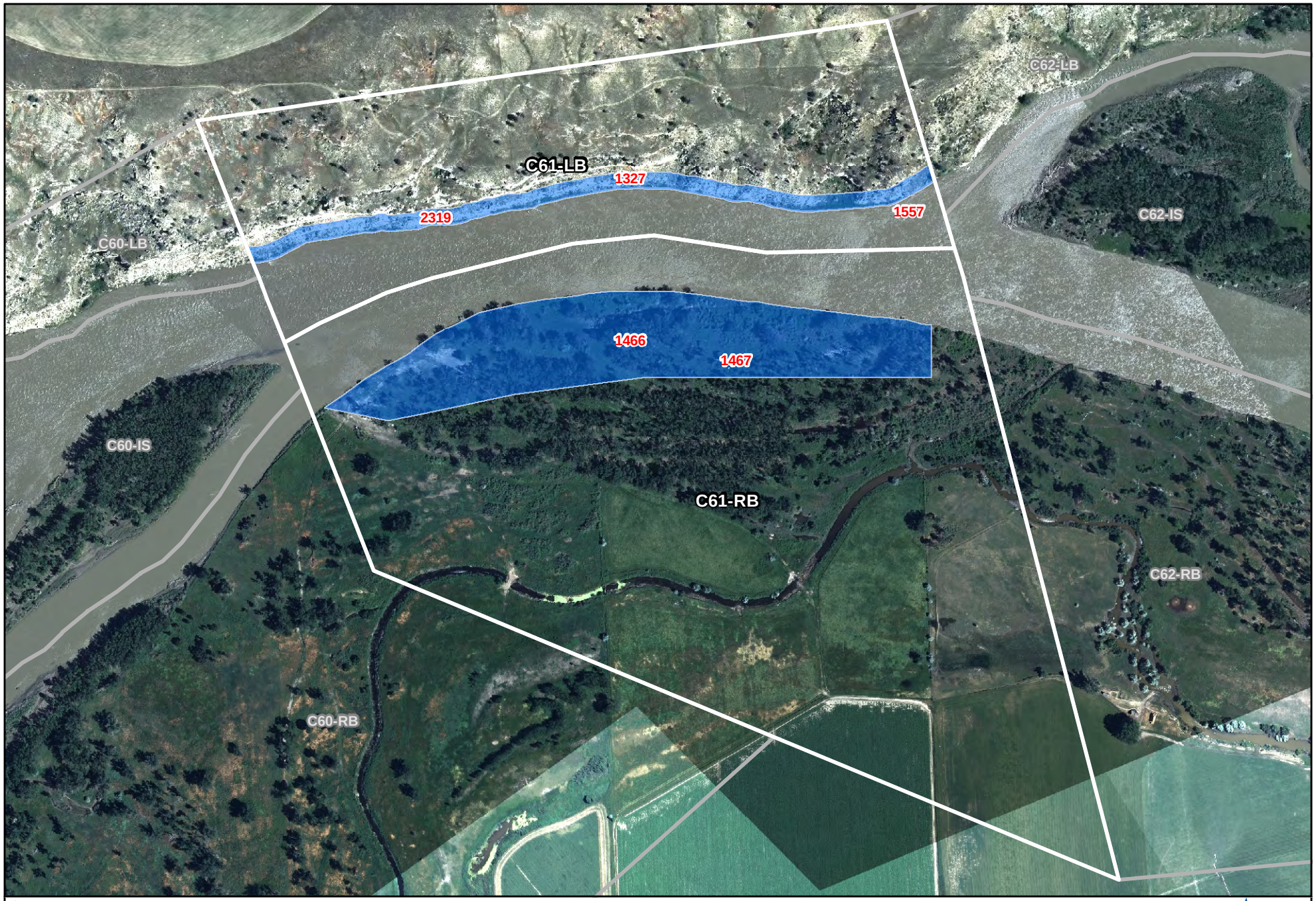
**Figure 5-2 Final SCAT Observations For SCAT Area: C57**

POLARIS APPLIED SCIENCES, INC.

Aerial Photography Dated July 20, 2011

O:\GIS\SCAT Mapping\Maps\Area Transition Reports MXD\ATR Fig 5 - Final_SCAT_Observations_DataPages.mxd

Printed: 10/24/2011 5:43:38 PM




9999 Oiling Zone ID
Heavy Oiling
Moderate Oiling
Light Oiling
Very Light Oiling
No Oil Observed

410 0 410 820 Feet

**Figure 5-3 Final SCAT Observations For SCAT Area: C61**

POLARIS APPLIED SCIENCES, INC.

Aerial Photography Dated July 20, 2011

O:\GIS\SCAT Mapping\Maps\Area Transition Reports MXD\ATR Fig 5 - Final_SCAT_Observations_DataPages.mxd

Printed: 10/25/2011 12:40:41 PM

9999 Oiling Zone ID
Heavy Oiling
Moderate Oiling
Light Oiling
Very Light Oiling
No Oil Observed

570 0 570 1,140 Feet

**Figure 5-4 Final SCAT Observations For SCAT Area: C62**

POLARIS APPLIED SCIENCES, INC.

Aerial Photography Dated July 20, 2011

O:\GIS\SCAT Mapping\Maps\Area Transition Reports MXD\ATR Fig 5 - Final_SCAT_Observations_DataPages.mxd

Printed: 10/11/2011 4:37:34 PM

9999 Oiling Zone ID
Heavy Oiling
Moderate Oiling
Light Oiling
Very Light Oiling
No Oil Observed

600 0 600 1,200 Feet

**Figure 5-5 Final SCAT Observations For SCAT Area: C63**

POLARIS APPLIED SCIENCES, INC.

Aerial Photography Dated July 20, 2011

O:\GIS\SCAT Mapping\Maps\Area Transition Reports MXD\ATR Fig 5 - Final_SCAT_Observations_DataPages.mxd

Printed: 10/25/2011 2:18:53 PM

9999 Oiling Zone ID
Heavy Oiling
Moderate Oiling
Light Oiling
Very Light Oiling
No Oil Observed

560 0 560 1,120 Feet

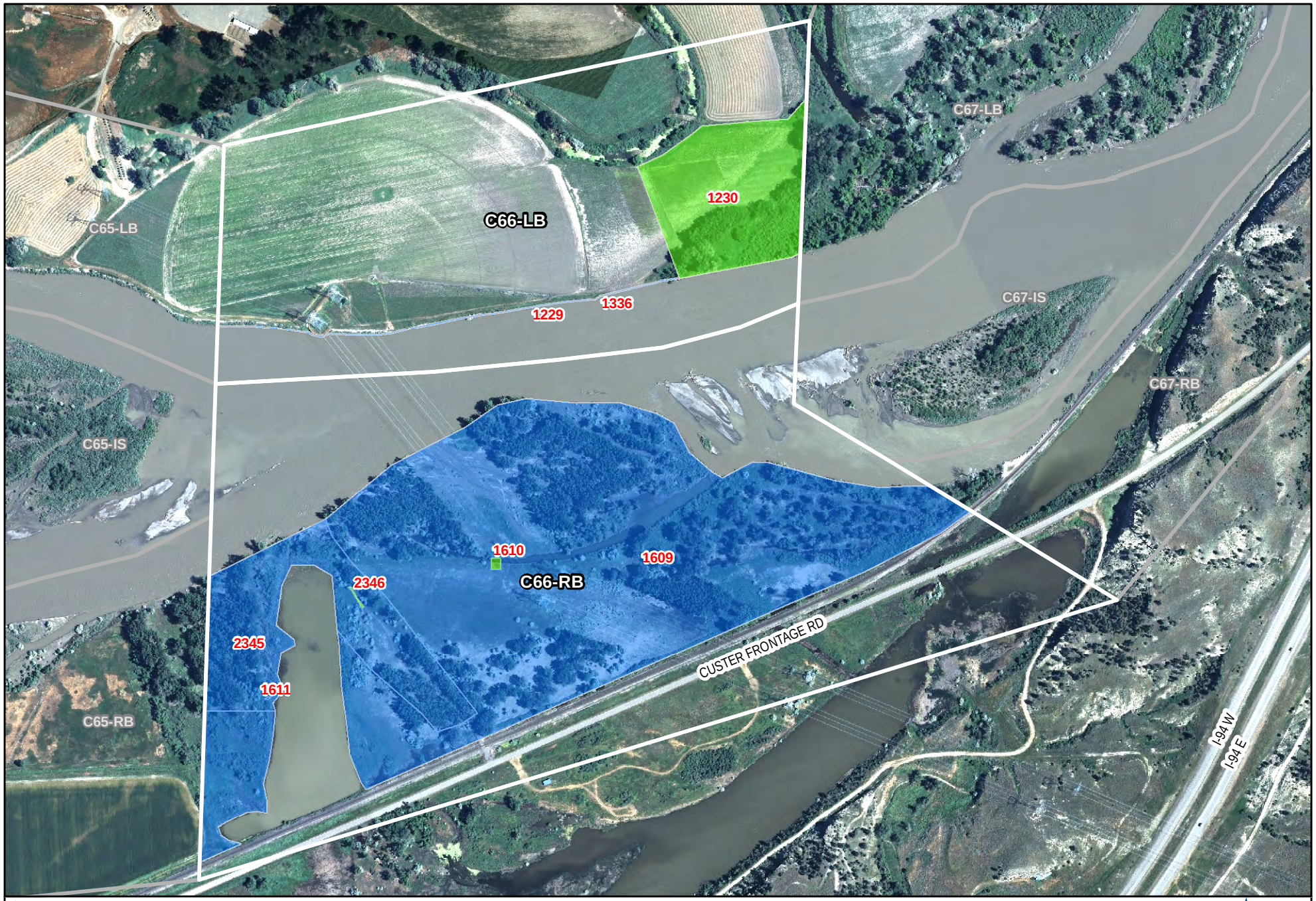
**Figure 5-6 Final SCAT Observations For SCAT Area: C65**

POLARIS APPLIED SCIENCES, INC.

Aerial Photography Dated July 20, 2011

O:\GIS\SCAT Mapping\Maps\Area Transition Reports MXD\ATR Fig 5 - Final_SCAT_Observations_DataPages.mxd

Printed: 10/25/2011 3:11:39 PM




9999 Oiling Zone ID
Heavy Oiling
Moderate Oiling
Light Oiling
Very Light Oiling
No Oil Observed

450 0 450 900 Feet

**Figure 5-7 Final SCAT Observations For SCAT Area: C66**

POLARIS APPLIED SCIENCES, INC.

Aerial Photography Dated July 20, 2011

O:\GIS\SCAT Mapping\Maps\Area Transition Reports MXD\ATR Fig 5 - Final_SCAT_Observations_DataPages.mxd

Printed: 10/25/2011 3:18:11 PM

9999 Oiling Zone ID
Heavy Oiling
Moderate Oiling
Light Oiling
Very Light Oiling
No Oil Observed

870 0 870 1,740 Feet

**Figure 5-8 Final SCAT Observations For SCAT Area: C73**

POLARIS APPLIED SCIENCES, INC.

Aerial Photography Dated July 20, 2011

O:\GIS\SCAT Mapping\Maps\Area Transition Reports MXD\ATR Fig 5 - Final_SCAT_Observations_DataPages.mxd

Printed: 10/24/2011 5:16:30 PM

# Appendix A

Sample Detection Summary

# Detections in Samples Collected in SCAT Area C56-C88

NA - Not Available

**Detected Above Screening Level**

| Area | Sample Num | Date | Sample Type | Matrix | Analytical Method | Analyte | Detected | Result | Screening Level | Result Qualifier | Units |
|---|---|---|---|---|---|---|---|---|---|---|---|
| C69 | PPMT0809SW201 | 08/09/2011 | Field | Water_Surface | MADEP EPH | Total Extractable Hydrocarbons | Y | 869 | 1000 | | ug/L |
| C69 | PPMT0809SW202 | 08/09/2011 | Field | Water_Surface | MADEP EPH | Total Extractable Hydrocarbons | Y | 573 | 1000 | | ug/L |
| C78 | CUMT0725SW504 | 07/25/2011 | Field | Water_Surface | EPA 6020 | Arsenic | Y | 8.4 | 10 | | ug/L |
| C78 | CUMT0725SW504 | 07/25/2011 | Field | Water_Surface | EPA 6020 | Barium | Y | 60.8 | 1000 | | ug/L |
| C78 | CUMT0725SW504 | 07/25/2011 | Field | Water_Surface | EPA 6020 | Calcium | Y | 19100 | NA | | ug/L |
| C78 | CUMT0725SW504 | 07/25/2011 | Field | Water_Surface | EPA 6020 | Chromium | Y | 2.5 | 100 | | ug/L |
| C78 | CUMT0725SW504 | 07/25/2011 | Field | Water_Surface | EPA 6020 | Lead | Y | 3.3 | 15 | | ug/L |
| C78 | CUMT0725SW504 | 07/25/2011 | Field | Water_Surface | EPA 6020 | Magnesium | Y | 6740 | NA | | ug/L |
| C78 | CUMT0725SW504 | 07/25/2011 | Field | Water_Surface | EPA 1631E | Mercury | Y | 0.00000791 | 0.00005 | | mg/L |
| C78 | CUMT0725SW504 | 07/25/2011 | Field | Water_Surface | EPA 6020 | Nickel | Y | 4 | 100 | | ug/L |
| C78 | CUMT0725SW504 | 07/25/2011 | Field | Water_Surface | EPA 6020 | Potassium | Y | 2160 | NA | | ug/L |
| C78 | CUMT0725SW504 | 07/25/2011 | Field | Water_Surface | EPA 6020 | Sodium | Y | 11200 | NA | | ug/L |
| C78 | CUMT0725SW504 | 07/25/2011 | Field | Water_Surface | SM 2540D | Total Suspended Solids | Y | 149 | NA | | mg/L |
| C78 | CUMT0725SW504 | 07/25/2011 | Field | Water_Surface | EPA 6020 | Vanadium | Y | 5.3 | 180 | | ug/L |
| C83 | SPSE125_071511 | 07/15/2011 | Field | Sediment | EPA 8270 | Benzo(a)anthracene | Y | **3490** | 108 | | ug/kg |
| C83 | SPSE125_071511 | 07/15/2011 | Field | Sediment | EPA 8270 | Benzo(b)fluoranthene | Y | 2680 | 10400 | | ug/kg |
| C83 | SPSE125_071511 | 07/15/2011 | Field | Sediment | EPA 8270 | Chrysene | Y | **3400** | 166 | | ug/kg |
| C83 | SPSE125_071511 | 07/15/2011 | Field | Sediment | EPA 8270 | Fluoranthene | Y | **11700** | 423 | | ug/kg |
| C83 | SPSE125_071511 | 07/15/2011 | Field | Sediment | EPA 8270 | Phenanthrene | Y | **6990** | 204 | | ug/kg |
| C83 | SPSE125_071511 | 07/15/2011 | Field | Sediment | EPA 8270 | Pyrene | Y | **9570** | 195 | | ug/kg |
| C88 | SPSE126_071511 | 07/15/2011 | Field | Sediment | MADEP EPH | Total Extractable Hydrocarbons | Y | **2150** | 200 | | mg/kg |

## Appendix C

Pre-Inspection Survey Transmittal

ARCADIS

# A Pre-Inspection Survey was not conducted for this area

## Appendix D

Post-Inspection Survey Transmittal

ARCADIS

# A Post-Inspection Survey was not conducted for this area

# Appendix E

Final SCAT Survey Forms and Sketches

ARCADIS

# C56

DB 16

**RIVER BANK OILING SUMMARY FORM for Silvertip Pipeline Incident** Page 1 of 2

| 1 GENERAL INFORMATION | Date (dd/mm/yy) | Time (24h): std / daylight | Water Level |
|---|---|---|---|
| Segment/Reach ID: C56 Left Bank / (Right Bank) / Island | 16/09/11 | 0810 hrs to 1130 hrs | low (mean) - bankfull - overbank |
| Operations Division: C | | | (falling) - steady – rising |
| Survey by: (Foot) / ATV / Boat / Helicopter / Overlook / _____ | | (Sun) / (Clouds) / Fog / Rain / Snow / Windy / (Calm) | Air Temp + / - 22 deg C |

| 2 SURVEY TEAM # 3 | Name | Organization | Signature |
|---|---|---|---|
| | Nathan Hammond | Cardno Entrix | Nathan Hammond |
| | John Brown | DEQ | |
| | Jeffery Frank Herrick | DEQ | |

**3 SEGMENT** Total Segment/Reach Length 1690 m Segment/Reach Length Surveyed 1030 m

Start GPS: LATITUDE _____ deg. _____ min. LONGITUDE _____ deg. _____ min. Datum: _____

End GPS: LATITUDE _____ deg. _____ min. LONGITUDE _____ deg. _____ min.

**4A RIVER BANK TYPE** SELECT only one primary (P) shoreline type and any number of secondary (S) types. CIRCLE those OILED

Bedrock: Cliff/Ramp____ Shelf____ | Manmade: Solid___ Permeable___ (type)____ | Wetland: Swamp____ Bog/Fen____ Marsh ____

Sediment Bank: Clay/Mud____ Sand____ Mixed X Pebble/Cobble____ Boulder____ Peat/Organic____ | Vegetated Bank: S | Wooded Upland: (P)

Sediment Flat: Clay/Mud____ Sand____ Mixed/Coarse____ | Other: ____ | If snow and ice use Winter River SOS

**4B RIVER VALLEY CHARACTER** select as appropriate | complete for primary

Cliff or Bluff:___ Est Height ____m | canyon____ manmade____ meander ____ confined or leveed ____ | Substrate Type: _____

Sloped:___(>5°)(15°)(30°) | straight____ braided X oxbow____ flood plain valley____ | Forested / (Vegetated) / Bare

**4C RIVER CHANNEL CHARACTER** circle or select as appropriate

est. width : < 1m 1–10 m 10–100 m (>100m) | est. water depth : <1 m (1-3 m) 3-10 m >10 m ____ m

shoal(s) present Y / (N) | point bar present Y / (N) | bar-shoal substrate : silt / sand / gravel / cobble / boulder / bedrock / debris

seasonal water level: low / (mean) / bank full / overbank flow | est. change over next 7 days : (falling) — same — rising

**5 OPERATIONAL FEATURES** Suitable backshore staging (Y) / N | Access: Direct from backshore (Y) / N Alongshore from next segment (Y) / N

Debris (Y) / N oiled Y / (N) amount 1 bags or ____ trucks | access restrictions

Oiled trees/shrubs (Y) / N | River Current strong Y / (N) | Other Features:

**6 SURFACE OILING CONDITIONS** begin with "A" in the lowest tidal zone - circle the zone/s that correspond to primary shoreline type

| OIL ZONE ID | RIVER BANK ZONE | | | | OIL COVER | | | OIL THICKNESS | | | | | OIL CHARACTER | | | | | | | | SUBST. TYPE(S) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | MS | LB | UB | OB | Length m | Width m | Distrib. % | TO | CV | CT | ST | FL | FR | MS | TB | PT | TC | SR | AP | NO | |
| 2321 A | | | S | P | 1030 | 130 | 0 | | | | | | | | | | | | | ✓ | |
| 2322 B | | | P | | 150 | 50 | <1 | | | S | P | | | | | | X | | | | Veg |

**7 SUBSURFACE OILING CONDITIONS** use letter for ZONE location plus Number of pit or trench — e.g., "A1"

| TRENCH or PIT NO. | RIVER BANK ZONE | | | | MAX. PIT DEPTH | OILED ZONE | SUBSURFACE OIL CHARACTER | | | | | | | WATER TABLE | SHEEN COLOUR | CLEAN BELOW | SUBST. TYPE(S) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | MS | LB | UB | OB | cm | cm-cm | SAP | OP | PP | OR | OF | TR | NO | cm | B, R, S, N | Yes / No | |
| | | | | | | | | | | | | | | | | | |

**8 COMMENTS** ecological/recreational/cultural/economic constraints - shorezone biota and wildlife observations - cleanup recommendations

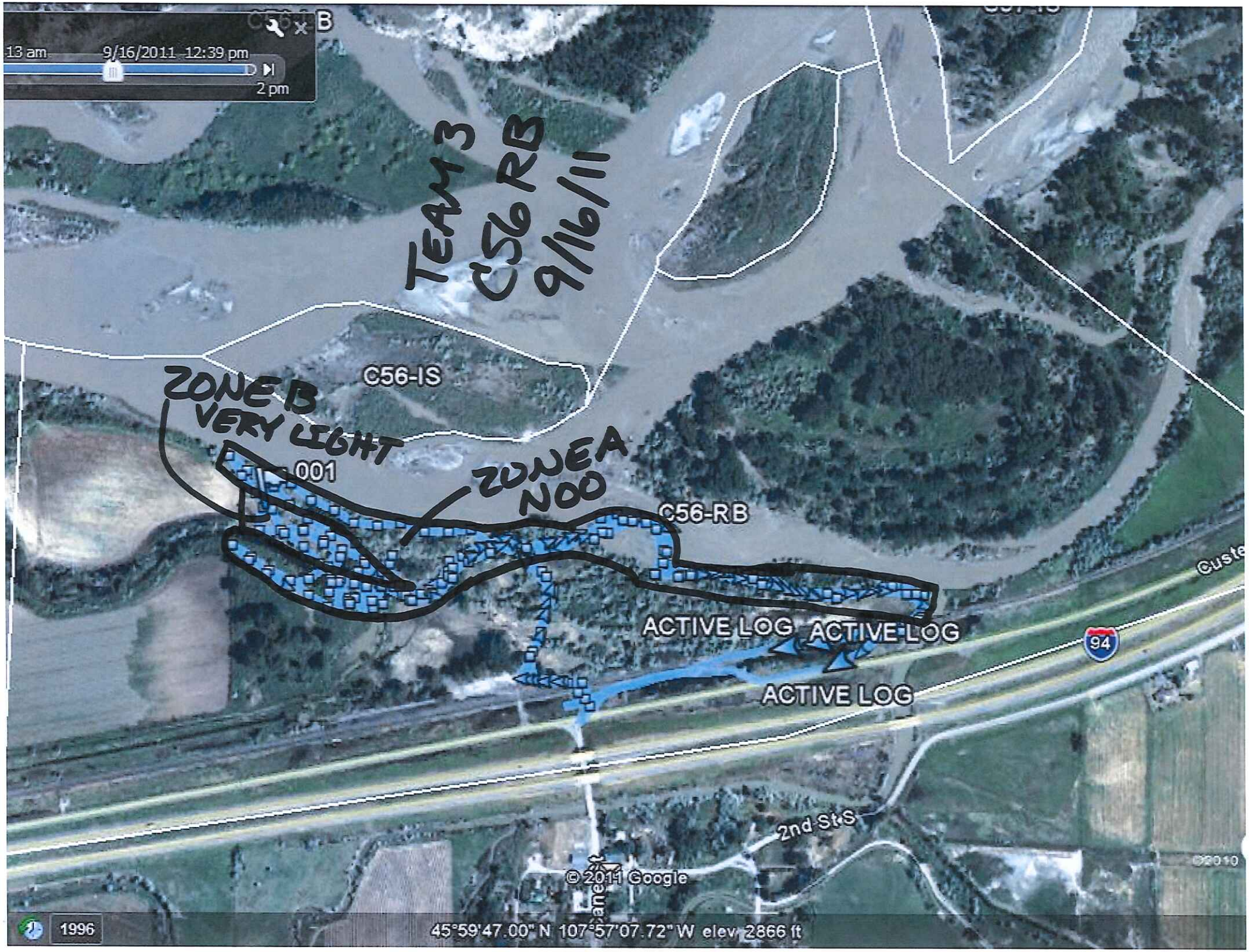
Overbank Survey Required (Y) / N Overbank Survey Completed (Y) / N Shoreline Survey Completed (Y) / N

Zone A - NOO - No Treatment Required

Zone B - ATM 1 Utilized by hot shot crew to collect one bag of oiled vegetation. No Further Treatment.

Sketch (Yes) / No Photos Yes / (No) Frames/Photographer: _____

Ver. 31 July 2011


13 am
9/16/2011 12:39 pm
2 pm
TEAM 3
C56 RB
9/16/11
C56-IS
ZONE B
VERY LIGHT
001
ZONE A
N00
C56-RB
ACTIVE LOG
ACTIVE LOG
ACTIVE LOG
94
2nd St S
© 2011 Google
1996
45°59'47.00" N 107°57'07.72" W elev 2866 ft

DB/G

**RIVER BANK OILING SUMMARY FORM for Silvertip Pipeline Incident** Page 1 of 2

| 1 GENERAL INFORMATION | Date (dd/mm/yy) | Time (24h): std / daylight | Water Level |
|---|---|---|---|
| Segment/Reach ID: C56 Left Bank / Right Bank / Island | 19/09/2011 | 10:00 hrs to 12:00 hrs | low - mean - bankfull - overbank |
| Operations Division: C | | | falling - steady - rising |
| Survey by: Foot / ATV / Boat / Helicopter / Overlook / _____ | Sun / Clouds / Fog / Rain / Snow / Windy / Calm | | Air Temp + / - 20 deg C |

**2 SURVEY TEAM #** 2

| Name | Organization | Signature |
|---|---|---|
| Merlo Gauvreau | Polaris | |
| Mark Ewanic | DEQ | |
| Mark Peterson | DEQ | |

**3 SEGMENT** Total Segment/Reach Length 732 m Segment/Reach Length Surveyed 732 m

Start GPS: LATITUDE _____ deg. _____ min. LONGITUDE _____ deg. _____ min. Datum: _____

End GPS: LATITUDE _____ deg. _____ min. LONGITUDE _____ deg. _____ min.

**4A RIVER BANK TYPE** SELECT only one primary (P) shoreline type and any number of secondary (S) types. CIRCLE those OILED

Bedrock: Cliff/Ramp____ Shelf____ | Manmade: Solid___ Permeable___ (type)____ | Wetland: Swamp____ Bog/Fen____ Marsh____

Sediment Bank: Clay/Mud____ Sand S Mixed S Pebble/Cobble____ Boulder____ Peat/Organic____ | Vegetated Bank: S | Wooded Upland: P

Sediment Flat: Clay/Mud____ Sand____ Mixed/Coarse____ | Other: ____ | If snow and ice use Winter River SOS

**4B RIVER VALLEY CHARACTER** select as appropriate | complete for primary

Cliff or Bluff:___ Est Height ____m | canyon____ manmade____ meander ____ confined or leveed ____ | Substrate Type: _____

Sloped:___(>5°)(15°)(30°) | straight____ braided X oxbow____ flood plain valley____ | Forested / Vegetated / Bare

**4C RIVER CHANNEL CHARACTER** circle or select as appropriate

est. width: < 1m 1–10 m 10–100 m >100m | est. water depth: <1 m 1-3 m 3-10 m >10 m ____ m

shoal(s) present Y / N | point bar present Y / N | bar-shoal substrate: silt / sand / gravel / cobble / boulder / bedrock / debris

seasonal water level: low / mean / bank full / overbank flow | est. change over next 7 days: falling – same – rising

**5 OPERATIONAL FEATURES** Suitable backshore staging Y / N | Access: Direct from backshore Y / N Alongshore from next segment Y / N

Debris Y / N oiled Y / N amount — bags or — trucks | access restrictions

Oiled trees/shrubs Y / N | River Current strong Y / N | Other Features:

**6 SURFACE OILING CONDITIONS** begin with "A" in the lowest tidal zone - circle the zone/s that correspond to primary shoreline type

| OIL ZONE ID | RIVER BANK ZONE MS | LB | UB | OB | OIL COVER Length m | Width m | Distrib. % | OIL THICKNESS TO | CV | CT | ST | FL | OIL CHARACTER FR | MS | TB | PT | TC | SR | AP | NO | SUBST. TYPE(S) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2323 A | | | | X | 150 | 420 | <1 | | | S | P | | | | | | | X | | | Vg. Db, grass |
| 2324 B | | | | X | 500 | 420 | | | | | | | | | | | | | | X | |
| 2325 C | | | | X | 120 | 420 | | | | | | | | | | | | | | X | |

**7 SUBSURFACE OILING CONDITIONS** use letter for ZONE location plus Number of pit or trench — e.g., "A1"

| TRENCH or PIT NO. | RIVER BANK ZONE MS | LB | UB | OB | MAX. PIT DEPTH cm | OILED ZONE cm-cm | SUBSURFACE OIL CHARACTER SAP | OP | PP | OR | OF | TR | NO | WATER TABLE cm | SHEEN COLOUR B, R, S, N | CLEAN BELOW Yes / No | SUBST. TYPE(S) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | | | | | | | | |

**8 COMMENTS** ecological/recreational/cultural/economic constraints - shorezone biota and wildlife observations - cleanup recommendations

Overbank Survey Required Y / N Overbank Survey Completed Y / N Shoreline Survey Completed Y / N

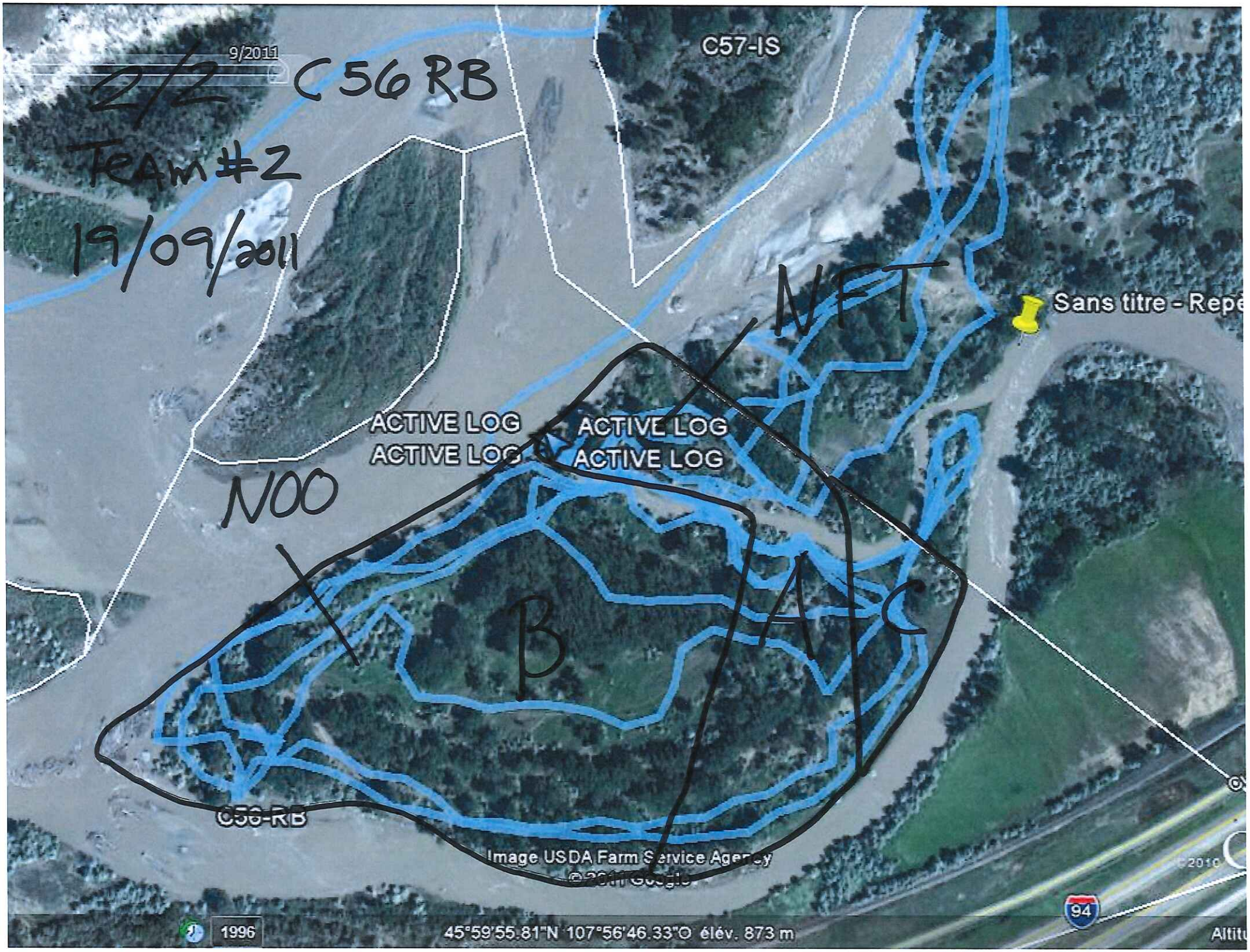
A: Initial SCAT with Ops Hot Shots
Oiled debris, stain on tree and grass, clean by the ops.
Meet the condition of the CTR, NFT

B: NOO

C: NOO

Sketch Yes / No Photos Yes / No Frames/Photographer: _____

Ver. 31 July 2011


9/2011
2/2
C56 RB
TEAM #2
19/09/2011
C57-IS
NFT
Sans titre - Repè
ACTIVE LOG
ACTIVE LOG
ACTIVE LOG
ACTIVE LOG
NOO
B
A
C
C56-RB
Image USDA Farm Service Agency
1996
45°59'55.81"N 107°56'46.33"O élév. 873 m
94

PB/G

**RIVER BANK OILING SUMMARY FORM for Silvertip Pipeline Incident** Page 1 of 2

**1 GENERAL INFORMATION**

Segment/Reach ID: C56 Left Bank / Right Bank / Island

Operations Division: C

Survey by: Foot / ATV / Boat / Helicopter / Overlook / _____

Date (dd/mm/yy): 17/09/2011

Time (24h): std / daylight 14:00 hrs to 15:30 hrs

Sun / Clouds / Fog / Rain / Snow / Windy / Calm

Water Level: low - mean - bankfull - overbank; falling - steady – rising

Air Temp (+) / - 25 deg C

**2 SURVEY TEAM #** 1+2

| Name | Organization | Signature |
|---|---|---|
| Merlo Gouvreau | Polaris | |
| Todd Farrar | Polaris | |
| Jessica Ross | DEQ | |
| Daryl Reed | DEQ | |
| Damien Korte | Entrix | |

**3 SEGMENT** Total Segment/Reach Length 537 m Segment/Reach Length Surveyed 537 m

Start GPS: LATITUDE _____ deg. _____ min. LONGITUDE _____ deg. _____ min. Datum: _____

End GPS: LATITUDE _____ deg. _____ min. LONGITUDE _____ deg. _____ min.

**4A RIVER BANK TYPE** SELECT only one primary (P) shoreline type and any number of secondary (S) types. CIRCLE those OILED

Bedrock: Cliff/Ramp____ Shelf____ | Manmade: Solid___ Permeable___ (type)____ | Wetland: Swamp____ Bog/Fen____ Marsh ____

Sediment Bank: Clay/Mud____ Sand S Mixed____ Pebble/Cobble S Boulder____ Peat/Organic____ | Vegetated Bank:____ | Wooded Upland: P

Sediment Flat: Clay/Mud____ Sand____ Mixed/Coarse____ | Other: ____ | If snow and ice use Winter River SOS

**4B RIVER VALLEY CHARACTER** select as appropriate

Cliff or Bluff:____ Est Height ____m | canyon____ manmade____ meander ____ confined or leveed ____

Sloped:___(>5°)(15°)(30°) | straight P braided S oxbow____ flood plain valley____

complete for primary: Substrate Type: Mixed; Forested / Vegetated / Bare

**4C RIVER CHANNEL CHARACTER** circle or select as appropriate

est. width: < 1m 1–10 m 10–100 m >100m

est. water depth: <1 m 1-3 m 3-10 m >10 m ____ m

shoal(s) present Y / N

point bar present Y / N

bar-shoal substrate: silt / sand / gravel / cobble / boulder / bedrock / debris

seasonal water level: low / mean / bank full / overbank flow

est. change over next 7 days: falling — same — rising

**5 OPERATIONAL FEATURES**

Suitable backshore staging Y / N

Access: Direct from backshore Y / N Alongshore from next segment Y / N

Debris: Y / N oiled Y / N amount 4 bags or — trucks

access restrictions

Oiled trees/shrubs Y / N

River Current strong Y / N

Other Features:

**6 SURFACE OILING CONDITIONS** begin with "A" in the lowest tidal zone - circle the zone/s that correspond to primary shoreline type

| OIL ZONE ID | RIVER BANK ZONE MS | LB | UB | OB | OIL COVER Length m | Width m | Distrib. % | OIL THICKNESS TO | CV | CT | ST | FL | OIL CHARACTER FR | MS | TB | PT | TC | SR | AP | NO | SUBST. TYPE(S) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| A | | | | X | 267 | 223 | <1 | | | S | P | | | | | | X | | | | Vg, Dc |
| B | | | | X | 260 | 230 | | | | | | | | | | | | | | X | |

2335
2336

**7 SUBSURFACE OILING CONDITIONS** use letter for ZONE location plus Number of pit or trench — e.g., "A1"

| TRENCH or PIT NO. | RIVER BANK ZONE MS | LB | UB | OB | MAX. PIT DEPTH cm | OILED ZONE cm-cm | SUBSURFACE OIL CHARACTER SAP | OP | PP | OR | OF | TR | NO | WATER TABLE cm | SHEEN COLOUR B, R, S, N | CLEAN BELOW Yes / No | SUBST. TYPE(S) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | | | | | | | | |

**8 COMMENTS** ecological/recreational/cultural/economic constraints - shorezone biota and wildlife observations - cleanup recommendations

Overbank Survey Required Y / N Overbank Survey Completed Y / N Shoreline Survey Completed Y / N

Initial SCAT with Ops Hot Shot

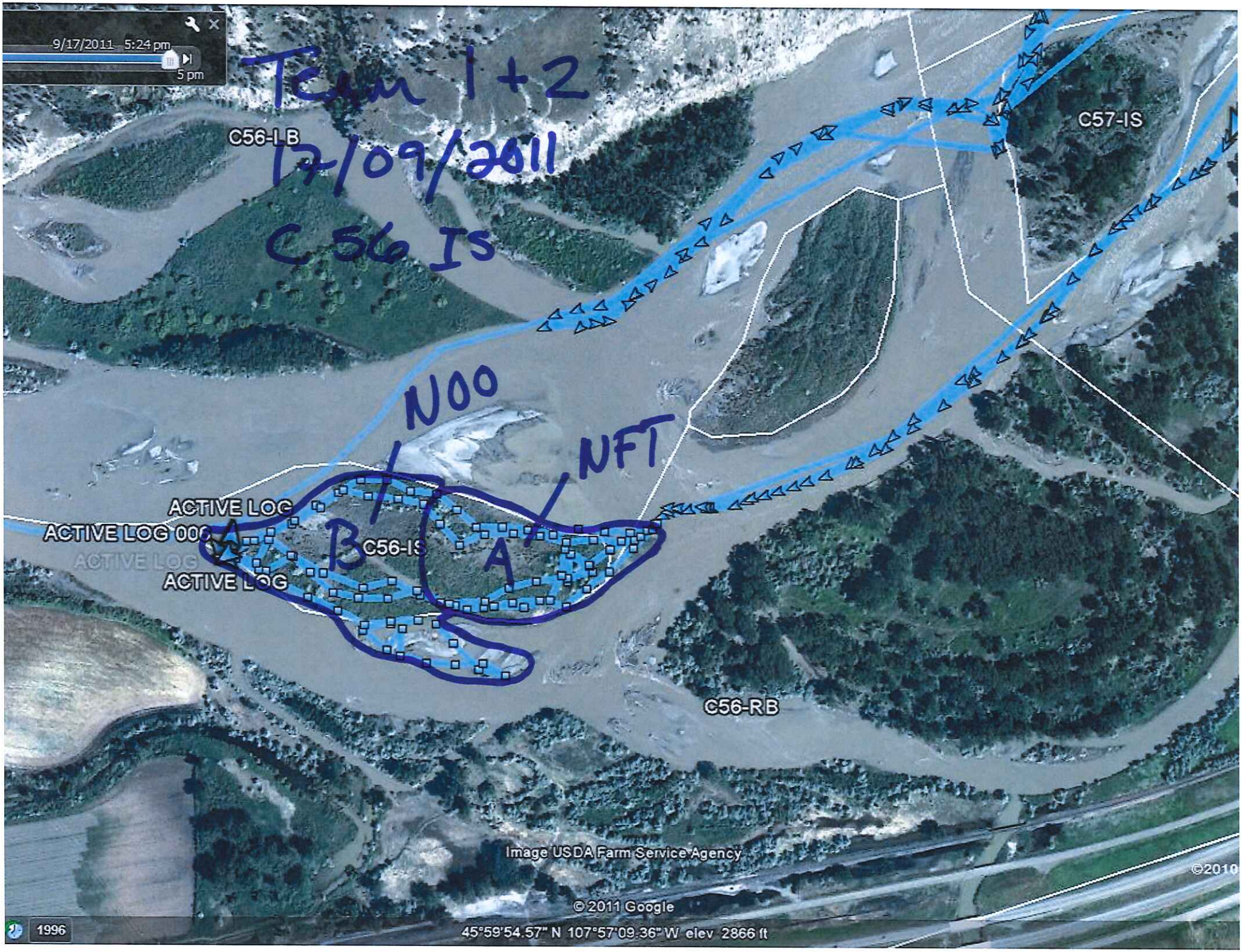
A: Stain and coat on Trees, the Hot Shot removed 4 Bags

Meet the conditions of the CTR, NFT

B: NOO

Sketch Yes / No Photos Yes / No Frames/Photographer: _____

Ver. 31 July 2011


9/17/2011 5:24 pm
5 pm
Team 1+2
12/09/2011
C 56 IS
C56-LB
C57-IS
N00
NFT
B
A
ACTIVE LOG
ACTIVE LOG 006
ACTIVE LOG
ACTIVE LOG
C56-IS
C56-RB
Image USDA Farm Service Agency
©2010
© 2011 Google
1996
45°59'54.57" N 107°57'09.36" W elev 2866 ft

DB/G

**RIVER BANK OILING SUMMARY FORM for Silvertip Pipeline Incident** Page _____ of _____

| 1 GENERAL INFORMATION | Date (dd/mm/yy) | Time (24h): std / daylight | Water Level |
|---|---|---|---|
| Segment/Reach ID: C57 Left Bank / ~~Right Bank~~ / Island (Island ok 9/24/11 CK 9/23/11) | 17/09/11 | 1100 hrs to 1400 hrs | low / mean / bankfull - overbank |
| Operations Division: (Right Bank) | | | falling / steady – rising |
| Survey by: Foot / ATV / Boat / Helicopter / Overlook / _____ | | Sun / Clouds / Fog / Rain / Snow / Windy / Calm | Air Temp + / - 26 deg C |

**2 SURVEY TEAM # 1 & 2**

| Name | Organization | Signature |
|---|---|---|
| Todd Farrar | Polaris | |
| Jessica Ross | DEQ | |
| Merle Gauvreau | Polaris | |
| Damien Korte | Entrix | |
| Daryl Reed | DEQ | |

**3 SEGMENT** Total Segment/Reach Length 893 m Segment/Reach Length Surveyed 893 m

Start GPS: LATITUDE _____ deg. _____ min. LONGITUDE _____ deg. _____ min. Datum: _____

End GPS: LATITUDE _____ deg. _____ min. LONGITUDE _____ deg. _____ min.

**4A RIVER BANK TYPE** SELECT only one primary (P) shoreline type and any number of secondary (S) types. CIRCLE those OILED

Bedrock: Cliff/Ramp____ Shelf____ | Manmade: Solid___ Permeable___ (type)____ | Wetland: Swamp____ Bog/Fen____ Marsh ____

Sediment Bank: Clay/Mud____ Sand____ Mixed____ Pebble/Cobble S Boulder____ Peat/Organic____ | Vegetated Bank: P | Wooded Upland: ____

Sediment Flat: Clay/Mud____ Sand____ Mixed/Coarse____ | Other: ____ | If snow and ice use Winter River SOS

**4B RIVER VALLEY CHARACTER** select as appropriate | complete for primary

Cliff or Bluff: ____ Est Height ____ m | canyon____ manmade____ meander ____ confined or leveed ____ | Substrate Type: Silt

Sloped: ___ (>5°)(15°)(30°) | straight____ braided P oxbow____ flood plain valley____ | Forested / Vegetated / Bare

**4C RIVER CHANNEL CHARACTER** circle or select as appropriate

est. width: < 1m 1–10 m 10–100 m >100m | est. water depth: <1 m 1-3 m 3-10 m >10 m ____ m

shoal(s) present Y / N | point bar present Y / N | bar-shoal substrate: silt / sand / gravel / cobble / boulder / bedrock / debris

seasonal water level: low / mean / bank full / overbank flow | est. change over next 7 days: falling — same — rising

**5 OPERATIONAL FEATURES** Suitable backshore staging Y / N | Access: Direct from backshore Y / N Alongshore from next segment Y N

Debris Y / N oiled Y / N amount 4 bags or ____ trucks | access restrictions Boat Access only

Oiled trees/shrubs Y / N | River Current strong Y / N | Other Features:

**6 SURFACE OILING CONDITIONS** begin with "A" in the lowest tidal zone - circle the zone/s that correspond to primary shoreline type

| OIL ZONE ID | RIVER BANK ZONE | | | | OIL COVER | | | OIL THICKNESS | | | | | OIL CHARACTER | | | | | | | | SUBST. TYPE(S) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | MS | LB | UB | OB | Length m | Width m | Distrib. % | TO | CV | CT | ST | FL | FR | MS | TB | PT | TC | SR | AP | NO | |
| A | | | | X | 893 | 555 | 21 | | | S | P | | | | | | P | | | | WV |

2334

**7 SUBSURFACE OILING CONDITIONS** use letter for ZONE location plus Number of pit or trench — e.g., "A1"

| TRENCH or PIT NO. | RIVER BANK ZONE | | | | MAX. PIT DEPTH | OILED ZONE | SUBSURFACE OIL CHARACTER | | | | | | | WATER TABLE | SHEEN COLOUR | CLEAN BELOW | SUBST. TYPE(S) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | MS | LB | UB | OB | cm | cm-cm | SAP | OP | PP | OR | OF | TR | NO | cm | B, R, S, N | Yes / No | |
| | | | | | | | | | | | | | | | | | |

**8 COMMENTS** ecological/recreational/cultural/economic constraints - shorezone biota and wildlife observations - cleanup recommendations

Overbank Survey Required Y / N Overbank Survey Completed Y / N Shoreline Survey Completed Y / N

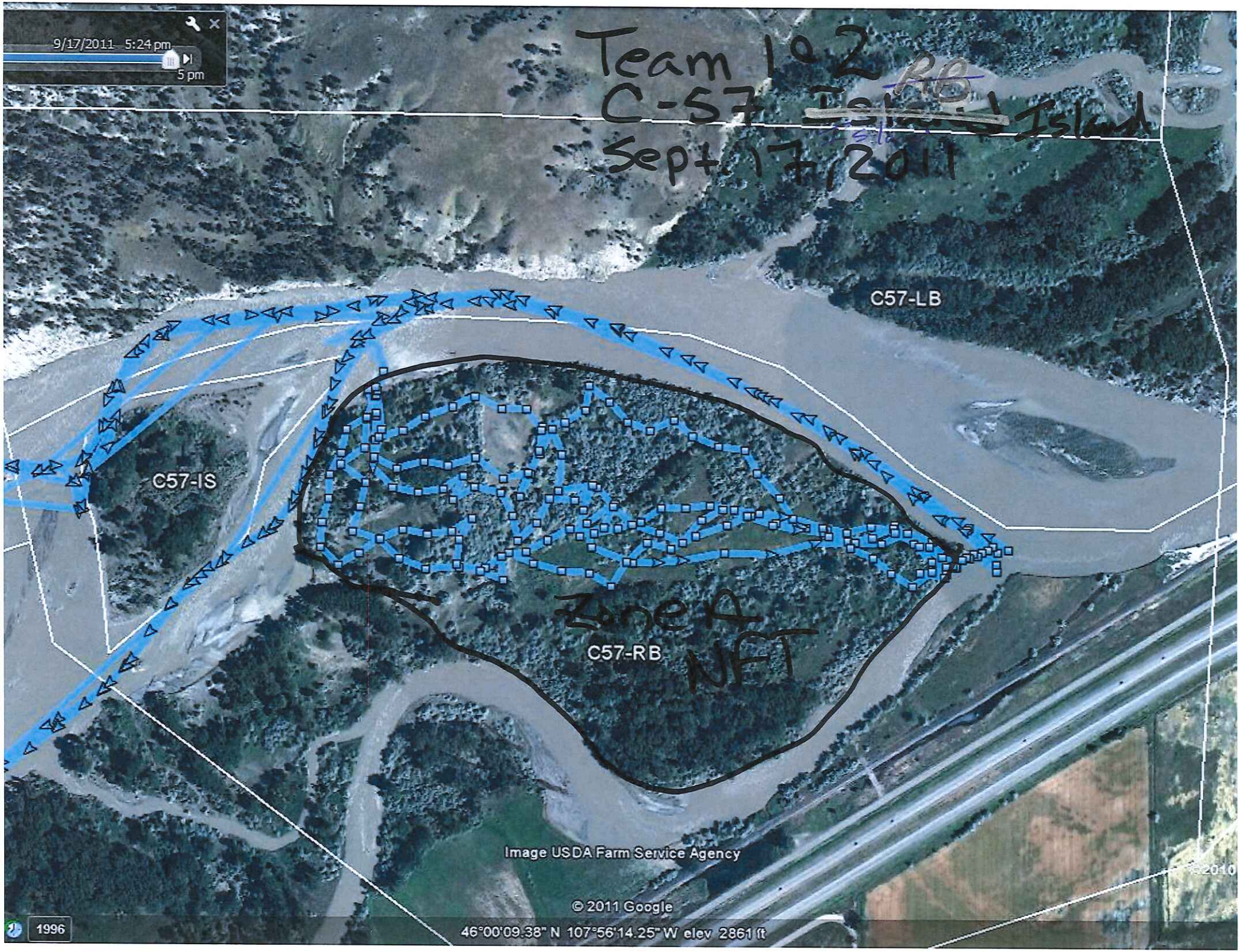
This survey filled in a gap in a previous survey. There was sporadic cont a stain primarily on Russian Olive Shrubs. We had two hot shot teams that removed or Treated All oiling in Accordance with OTR. There is No Further Treatment (NFT) required.

Sketch Yes / No Photos Yes / No Frames/Photographer: _____

Ver. 31 July 2011

ARCADIS

# C57


9/17/2011 5:24 pm
5 pm
Team 1 & 2
C-57 Island
Sept. 17, 2011
C57-LB
C57-IS
C57-RB
Zone A
NFT
Image USDA Farm Service Agency
© 2011 Google
1996
46°00'09.38" N 107°56'14.25" W elev 2861 ft

ARCADIS

# C61

DB/G

**RIVER BANK OILING SUMMARY FORM for Silvertip Pipeline Incident** Page _____ of _____

C-61 LB

| 1 GENERAL INFORMATION | Date (dd/mm/yy) | Time (24h): std / daylight | Water Level |
|---|---|---|---|
| Segment/Reach ID: C-61 Left Bank / Right Bank / [redacted] | 16/09/11 | 1600 hrs to 1615 hrs | low - mean - bankfull - overbank |
| Operations Division: C | | | falling - steady – rising |
| Survey by: Foot / ATV / Boat / Helicopter / Overlook / _____ | | Sun / Clouds / Fog / Rain / Snow / Windy / Calm | Air Temp + / - 24 deg C |

| 2 SURVEY TEAM # 1 | Name | Organization | Signature |
|---|---|---|---|
| | Todd Farrar | Polaris | |
| | Jessica Ross | DEQ | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |

**3 SEGMENT** Total Segment/Reach Length 904 m Segment/Reach Length Surveyed 904 m

Start GPS: LATITUDE _____ deg. _____ min. LONGITUDE _____ deg. _____ min. Datum: _____

End GPS: LATITUDE _____ deg. _____ min. LONGITUDE _____ deg. _____ min.

**4A RIVER BANK TYPE** SELECT only one primary (P) shoreline type and any number of secondary (S) types. CIRCLE those OILED

Bedrock: Cliff/Ramp P Shelf ____ | Manmade: Solid ___ Permeable ___ (type) ____ | Wetland: Swamp ____ Bog/Fen ____ Marsh ____

Sediment Bank: Clay/Mud ____ Sand ____ Mixed ____ Pebble/Cobble ____ Boulder ____ Peat/Organic ____ | Vegetated Bank: S | Wooded Upland: ____

Sediment Flat: Clay/Mud ____ Sand ____ Mixed/Coarse ____ | Other: ____ | If snow and ice use Winter River SOS

**4B RIVER VALLEY CHARACTER** select as appropriate | complete for primary

Cliff or Bluff: P Est Height [redacted] m | canyon ____ manmade ____ meander ____ confined or leveed ____ | Substrate Type: Rock

Sloped: 80 (>5°)(15°)(30°) 60 | straight ____ braided ____ oxbow ____ flood plain valley ____ | Forested / Vegetated / Bare

**4C RIVER CHANNEL CHARACTER** circle or select as appropriate

est. width: < 1m 1–10 m 10–100 m >100m | est. water depth: <1 m 1-3 m 3-10 m >10 m ____ m

shoal(s) present Y / N | point bar present Y / N | bar-shoal substrate: silt / sand / gravel / cobble / boulder / bedrock / debris

seasonal water level: low / mean / bank full / overbank flow | est. change over next 7 days: falling — same — rising

**5 OPERATIONAL FEATURES** Suitable backshore staging Y / N | Access: Direct from backshore Y / N Alongshore from next segment Y / N

Debris Y / N oiled Y / N amount ____ bags or ____ trucks | access restrictions Sheer cliff - Boat Access only

Oiled trees/shrubs Y / N | River Current strong Y / N | Other Features:

**6 SURFACE OILING CONDITIONS** begin with "A" in the lowest tidal zone - circle the zone/s that correspond to primary shoreline type

| OIL ZONE ID | RIVER BANK ZONE | | | | OIL COVER | | | OIL THICKNESS | | | | | OIL CHARACTER | | | | | | | | SUBST. TYPE(S) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | MS | LB | UB | OB | Length m | Width m | Distrib. % | TO | CV | CT | ST | FL | FR | MS | TB | PT | TC | SR | AP | NO | |
| A | | | X | | 904 | 20 | | | | | | | | | | | | | | X | |
| | | | | | | | | | | | | | | | | | | | | | |
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2319

**7 SUBSURFACE OILING CONDITIONS** use letter for ZONE location plus Number of pit or trench — e.g., "A1"

| TRENCH or PIT NO. | RIVER BANK ZONE | | | | MAX. PIT DEPTH | OILED ZONE | SUBSURFACE OIL CHARACTER | | | | | | | WATER TABLE | SHEEN COLOUR | CLEAN BELOW | SUBST. TYPE(S) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | MS | LB | UB | OB | cm | cm-cm | SAP | OP | PP | OR | OF | TR | NO | cm | B, R, S, N | Yes / No | |
| | | | | | | | | | | | | | | | | | |

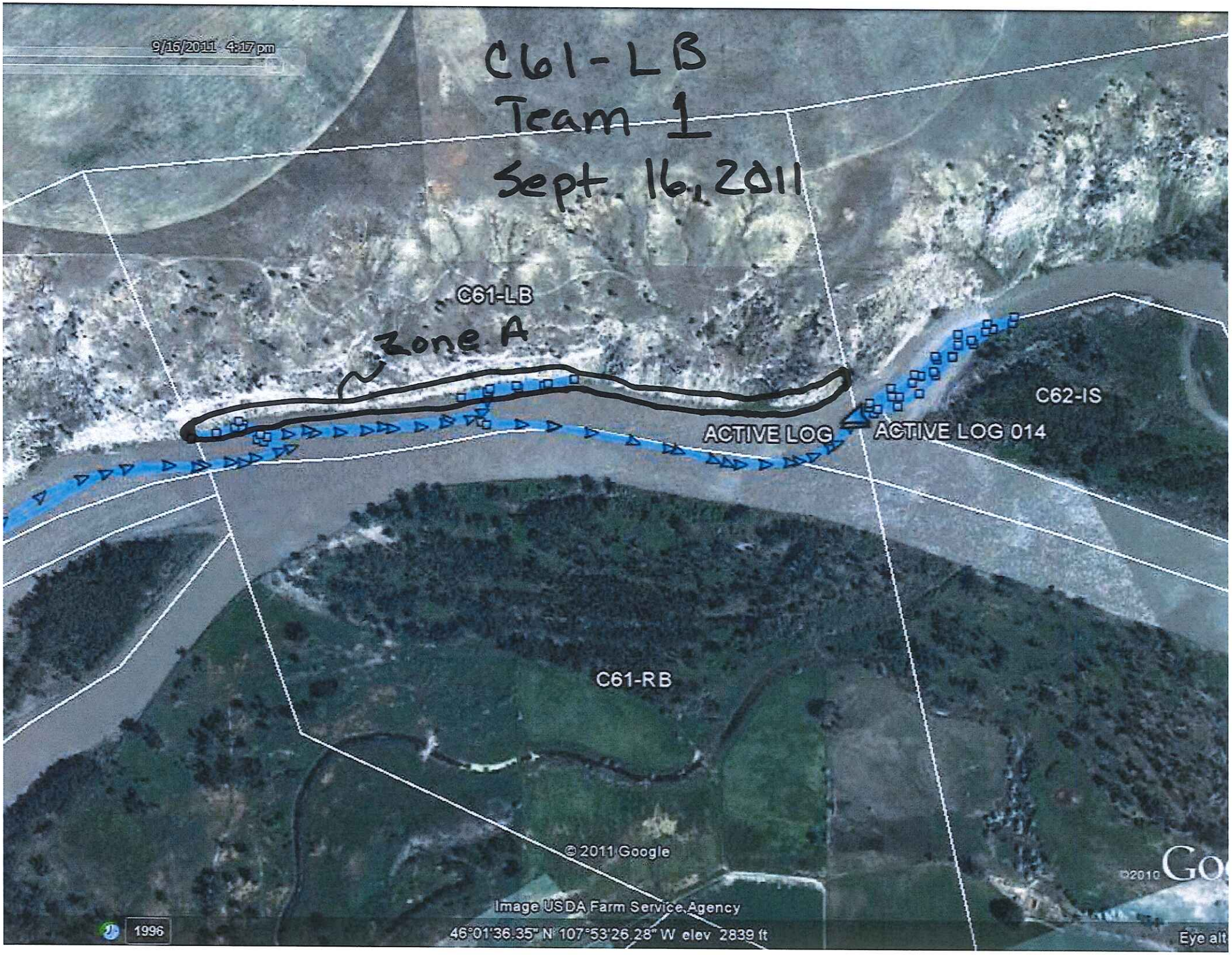
**8 COMMENTS** ecological/recreational/cultural/economic constraints - shorezone biota and wildlife observations - cleanup recommendations

Overbank Survey Required Y / N Overbank Survey Completed Y / N Shoreline Survey Completed Y / N

This survey was a partial survey to complete the segment once access was allowed. The segment is along a sheer cliff with vegetation. There was no oiling observed (NOO)

Sketch Yes / No Photos Yes / No Frames/Photographer: _____

Ver. 31 July 2011


9/16/2011 4:17 pm
C61-LB
Team 1
Sept 16, 2011
C61-LB
Zone A
C62-IS
ACTIVE LOG
ACTIVE LOG 014
C61-RB
© 2011 Google
Image USDA Farm Service Agency
46°01'36.35" N 107°53'26.28" W elev 2839 ft
1996
Eye alt

ARCADIS

# C62

DB/G

**RIVER BANK OILING SUMMARY FORM for Silvertip Pipeline Incident** Page _____ of _____

| 1 GENERAL INFORMATION | Date (dd/mm/yy) | Time (24h): std / daylight | Water Level |
|---|---|---|---|
| Segment/Reach ID: C62 Left Bank / Right Bank / Island | 16/09/11 | 1500 hrs to 1530 hrs | low - mean - bankfull - overbank |
| Operations Division: C | | | falling - steady – rising |
| Survey by: Foot / ATV / Boat / Helicopter / Overlook / _____ | Sun / Clouds / Fog / Rain / Snow / Windy / Calm | | Air Temp + / - 24 deg C |

**2 SURVEY TEAM #** 1

| Name | Organization | Signature |
|---|---|---|
| Todd Farrar | Polaris | |
| Jessica Ross | DEQ | |

**3 SEGMENT** Total Segment/Reach Length 270 m Segment/Reach Length Surveyed 270 m

Start GPS: LATITUDE _____ deg. _____ min. LONGITUDE _____ deg. _____ min. Datum: _____

End GPS: LATITUDE _____ deg. _____ min. LONGITUDE _____ deg. _____ min.

**4A RIVER BANK TYPE** SELECT only one primary (P) shoreline type and any number of secondary (S) types. CIRCLE those OILED

Bedrock: Cliff/Ramp P Shelf ____ | Manmade: Solid ____ Permeable ____ (type) ____ | Wetland: Swamp ____ Bog/Fen ____ Marsh ____

Sediment Bank: Clay/Mud ____ Sand ____ Mixed ____ Pebble/Cobble S Boulder ____ Peat/Organic ____ | Vegetated Bank: S | Wooded Upland: ____

Sediment Flat: Clay/Mud ____ Sand ____ Mixed/Coarse ____ | Other: ____ | If snow and ice use Winter River SOS

**4B RIVER VALLEY CHARACTER** select as appropriate | complete for primary

Cliff or Bluff: P Est Height 60 m | canyon ____ manmade ____ meander ____ confined or leveed ____ | Substrate Type: Rock

Sloped: 60 (>5°)(15°)(30°) | straight ____ braided ____ oxbow ____ flood plain valley ____ | Forested / Vegetated / Bare

**4C RIVER CHANNEL CHARACTER** circle or select as appropriate

est. width: < 1m 1–10 m 10–100 m >100m | est. water depth: <1 m 1-3 m 3-10 m >10 m ____ m

shoal(s) present Y / N | point bar present Y / N | bar-shoal substrate: silt / sand / gravel / cobble / boulder / bedrock / debris

seasonal water level: low / mean / bank full / overbank flow | est. change over next 7 days: falling – same — rising

**5 OPERATIONAL FEATURES** Suitable backshore staging Y / N | Access: Direct from backshore Y / N Alongshore from next segment Y / N

Debris Y / N oiled Y / N amount ____ bags or ____ trucks | access restrictions cliffs

Oiled trees/shrubs Y / N | River Current strong Y / N | Other Features:

**6 SURFACE OILING CONDITIONS** begin with "A" in the lowest tidal zone - circle the zone/s that correspond to primary shoreline type

| OIL ZONE ID | RIVER BANK ZONE | | | | OIL COVER | | | OIL THICKNESS | | | | | OIL CHARACTER | | | | | | | | SUBST. TYPE(S) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | MS | LB | UB | OB | Length m | Width m | Distrib. % | TO | CV | CT | ST | FL | FR | MS | TB | PT | TC | SR | AP | NO | |
| A | | | | X | 270 | 20 | | | | | | | | | | | | | | X | |

2320

2320

**7 SUBSURFACE OILING CONDITIONS** use letter for ZONE location plus Number of pit or trench — e.g., "A1"

| TRENCH or PIT NO. | RIVER BANK ZONE | | | | MAX. PIT DEPTH | OILED ZONE | SUBSURFACE OIL CHARACTER | | | | | | | WATER TABLE | SHEEN COLOUR | CLEAN BELOW | SUBST. TYPE(S) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | MS | LB | UB | OB | cm | cm-cm | SAP | OP | PP | OR | OF | TR | NO | cm | B, R, S, N | Yes / No | |
| | | | | | | | | | | | | | | | | | |

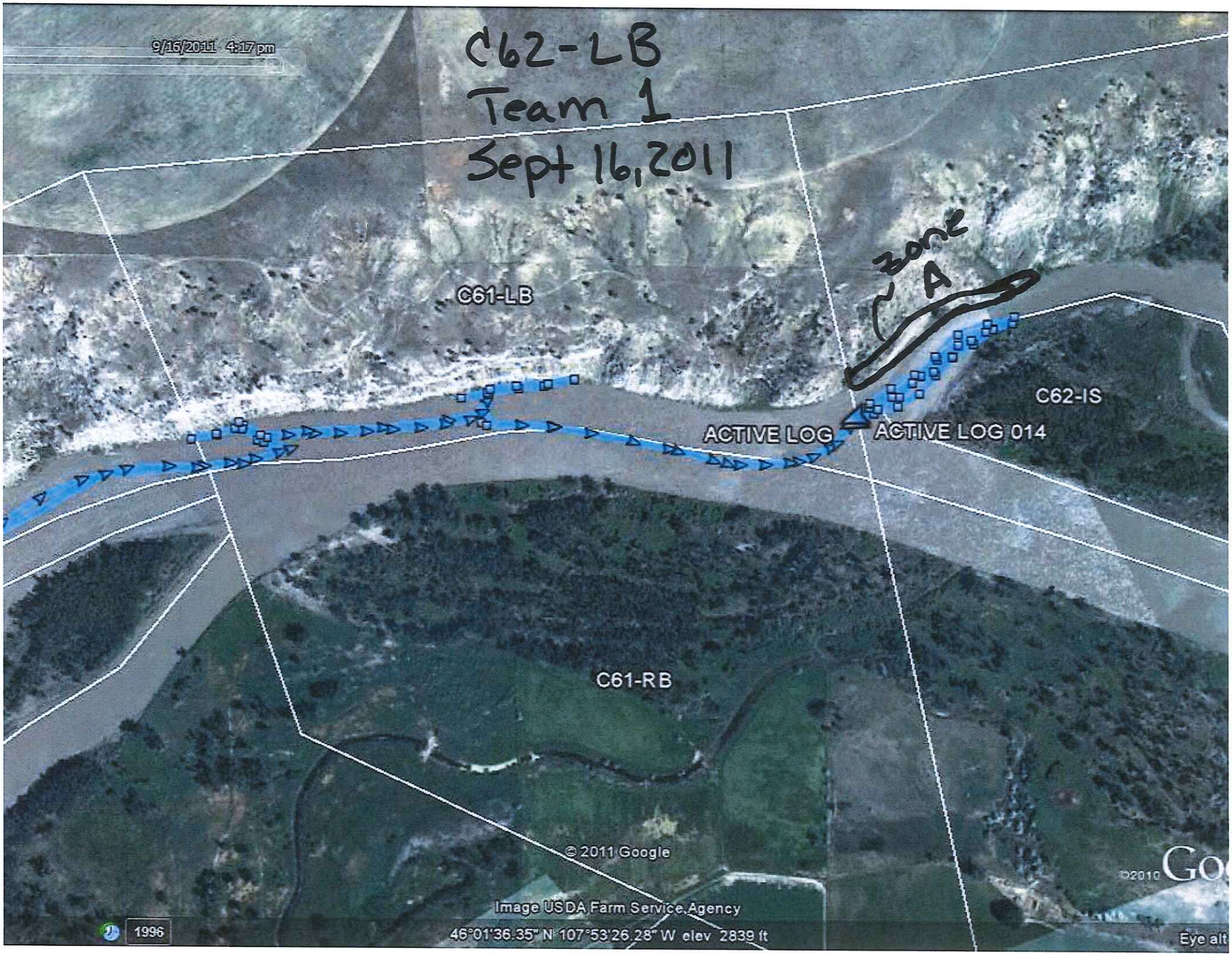
**8 COMMENTS** ecological/recreational/cultural/economic constraints - shorezone biota and wildlife observations - cleanup recommendations

Overbank Survey Required Y / N Overbank Survey Completed Y / N Shoreline Survey Completed Y / N

This survey completes the segment after Access Issues resolved. The segment has sheer cliffs with vegetated Bank. No oiling observed (NOO)

Sketch Yes / No Photos Yes / No Frames/Photographer: _____

Ver. 31 July 2011


9/16/2011 4:17 pm
C62-LB
Team 1
Sept 16, 2011
zone A
C61-LB
C62-IS
ACTIVE LOG
ACTIVE LOG 014
C61-RB
© 2011 Google
Image USDA Farm Service Agency
46°01'36.35" N 107°53'26.28" W elev 2839 ft
1996
Eye alt

DB / G

**RIVER BANK OILING SUMMARY FORM for Silvertip Pipeline Incident** Page _____ of _____

**1 GENERAL INFORMATION**

Segment/Reach ID: C62 Left Bank / Right Bank / Island

Operations Division: C

Survey by: Foot / ATV / Boat / Helicopter / Overlook / _____

Date (dd/mm/yy): 16/09/11

Time (24h): std / daylight 1530 hrs to 1600 hrs

Sun / Clouds / Fog / Rain / Snow / Windy / Calm

Water Level: low - mean - bankfull - overbank; falling - steady – rising

Air Temp + / - 24 deg C

**2 SURVEY TEAM #** 1

| Name | Organization | Signature |
|---|---|---|
| Todd Farrar | Polaris | |
| Jessica Ross | DEQ | |

**3 SEGMENT** Total Segment/Reach Length 300 m Segment/Reach Length Surveyed 300 m

Start GPS: LATITUDE _____ deg. _____ min. LONGITUDE _____ deg. _____ min. Datum: _____

End GPS: LATITUDE _____ deg. _____ min. LONGITUDE _____ deg. _____ min.

**4A RIVER BANK TYPE** SELECT only one primary (P) shoreline type and any number of secondary (S) types. CIRCLE those OILED

Bedrock: Cliff/Ramp_____ Shelf_____ | Manmade: Solid___ Permeable___ (type)_____ | Wetland: Swamp_____ Bog/Fen_____ Marsh _____

Sediment Bank: Clay/Mud_____ Sand_____ Mixed_____ Pebble/Cobble S Boulder_____ Peat/Organic_____ | Vegetated Bank: P | Wooded Upland: ____

Sediment Flat: Clay/Mud_____ Sand_____ Mixed/Coarse_____ | Other: _____ | If snow and ice use Winter River SOS

**4B RIVER VALLEY CHARACTER** select as appropriate | complete for primary

Cliff or Bluff:____ Est Height ____m | canyon_____ manmade____ meander ____ confined or leveed _____ | Substrate Type: _____

Sloped:___(>5°)(15°)(30°) | straight_____ braided P oxbow_____ flood plain valley_____ | Forested / Vegetated / Bare

**4C RIVER CHANNEL CHARACTER** circle or select as appropriate

est. width: < 1m 1–10 m 10–100 m >100m | est. water depth: <1 m 1-3 m 3-10 m >10 m ____ m

shoal(s) present Y / N | point bar present Y / N | bar-shoal substrate: silt / sand / gravel / cobble / boulder / bedrock / debris

seasonal water level: low / mean / bank full / overbank flow | est. change over next 7 days: falling — same — rising

**5 OPERATIONAL FEATURES** Suitable backshore staging Y / N | Access: Direct from backshore Y / N Alongshore from next segment Y / N

Debris Y / N oiled Y / N amount _____ bags or _____ trucks | access restrictions

Oiled trees/shrubs Y / N | River Current strong Y / N | Other Features:

**6 SURFACE OILING CONDITIONS** begin with "A" in the lowest tidal zone - circle the zone/s that correspond to primary shoreline type

| OIL ZONE ID | RIVER BANK ZONE | | | | OIL COVER | | | OIL THICKNESS | | | | | OIL CHARACTER | | | | | | | | SUBST. TYPE(S) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | MS | LB | UB | OB | Length m | Width m | Distrib. % | TO | CV | CT | ST | FL | FR | MS | TB | PT | TC | SR | AP | NO | |
| A | | | | X | 300 | 90 | | | | | | | | | | | | | | X | |

2337

**7 SUBSURFACE OILING CONDITIONS** use letter for ZONE location plus Number of pit or trench — e.g., "A1"

| TRENCH or PIT NO. | RIVER BANK ZONE | | | | MAX. PIT DEPTH | OILED ZONE | SUBSURFACE OIL CHARACTER | | | | | | | WATER TABLE | SHEEN COLOUR | CLEAN BELOW | SUBST. TYPE(S) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | MS | LB | UB | OB | cm | cm-cm | SAP | OP | PP | OR | OF | TR | NO | cm | B, R, S, N | Yes / No | |
| | | | | | | | | | | | | | | | | | |

**8 COMMENTS** ecological/recreational/cultural/economic constraints - shorezone biota and wildlife observations - cleanup recommendations

Overbank Survey Required Y / N Overbank Survey Completed Y / N Shoreline Survey Completed Y / N

This is a partial survey to complete the segment after access issues resolved. There was no oiling observed. This part of the island was under water until recently.

Sketch Yes / No Photos Yes / No Frames/Photographer: _____

Ver. 31 July 2011

C62- Island
Team 1
Sept 16, 2011
9/16/2011 4:17 pm
Zone A
C61-LB
C62-IS
ACTIVE LOG
ACTIVE LOG 014
C61-RB
© 2011 Google
Image USDA Farm Service Agency
46°01'36.35" N 107°53'26.28" W elev 2839 ft
1996
Eye alt

DB/G

**RIVER BANK OILING SUMMARY FORM for Silvertip Pipeline Incident** Page 1 of 2

| 1 GENERAL INFORMATION | Date (dd/mm/yy) | Time (24h): std / daylight | Water Level |
|---|---|---|---|
| Segment/Reach ID: C62 Left Bank / Right Bank / Island | 19/09/2011 | 13:00 hrs to 14:30 hrs | low - mean - bankfull - overbank |
| Operations Division: C | | | falling - steady - rising |
| Survey by: Foot / ATV / Boat / Helicopter / Overlook / _____ | Sun / Clouds / Fog / Rain / Snow / Windy / Calm | | Air Temp + / - 20 deg C |

**2 SURVEY TEAM #** 2

| Name | Organization | Signature |
|---|---|---|
| Merlo Gauvreau | Polaris | |
| Mark Ewanic | DEQ | |
| Mark Peterson | DEQ | |

**3 SEGMENT** Total Segment/Reach Length 488 m Segment/Reach Length Surveyed 488 m

Start GPS: LATITUDE _____ deg. _____ min. LONGITUDE _____ deg. _____ min. Datum: _____

End GPS: LATITUDE _____ deg. _____ min. LONGITUDE _____ deg. _____ min.

**4A RIVER BANK TYPE** SELECT only one primary (P) shoreline type and any number of secondary (S) types. CIRCLE those OILED

Bedrock: Cliff/Ramp____ Shelf____ | Manmade: Solid___ Permeable___ (type)____ | Wetland: Swamp____ Bog/Fen____ Marsh _____

Sediment Bank: Clay/Mud____ Sand S Mixed S Pebble/Cobble____ Boulder____ Peat/Organic____ | Vegetated Bank:____ | Wooded Upland: P

Sediment Flat: Clay/Mud____ Sand____ Mixed/Coarse____ | Other: ____ | If snow and ice use Winter River SOS

**4B RIVER VALLEY CHARACTER** select as appropriate | complete for primary

Cliff or Bluff:___ Est Height ____m | canyon____ manmade____ meander ____ confined or leveed ____ | Substrate Type: _____

Sloped:___(>5°)(15°)(30°) | straight____ braided X oxbow____ flood plain valley____ | Forested / Vegetated / Bare

**4C RIVER CHANNEL CHARACTER** circle or select as appropriate

est. width : < 1m 1–10 m 10–100 m >100m | est. water depth : <1 m 1-3 m 3-10 m >10 m ____ m

shoal(s) present Y / N point bar present Y / N | bar-shoal substrate : silt / sand / gravel / cobble / boulder / bedrock / debris

seasonal water level: low / mean / bank full / overbank flow | est. change over next 7 days : falling — same — rising

**5 OPERATIONAL FEATURES** Suitable backshore staging Y / N | Access: Direct from backshore Y / N Alongshore from next segment Y / N

Debris: Y / N oiled Y / N amount ____bags or ____trucks | access restrictions

Oiled trees/shrubs Y / N | River Current strong Y / N | Other Features:

**6 SURFACE OILING CONDITIONS** begin with "A" in the lowest tidal zone - circle the zone/s that correspond to primary shoreline type

| OIL ZONE ID | RIVER BANK ZONE | | | | OIL COVER | | | OIL THICKNESS | | | | | OIL CHARACTER | | | | | | | | SUBST. TYPE(S) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | MS | LB | UB | OB | Length m | Width m | Distrib. % | TO | CV | CT | ST | FL | FR | MS | TB | PT | TC | SR | AP | NO | |
| A | | | | X | 157 | 200 | <1 | | | S | P | | | | | | | X | | | Vg, Db. |
| B | | | | X | 310 | 200 | | | | | | | | | | | | | | X | |

2339
2340

**7 SUBSURFACE OILING CONDITIONS** use letter for ZONE location plus Number of pit or trench — e.g., "A1"

| TRENCH or PIT NO. | RIVER BANK ZONE | | | | MAX. PIT DEPTH | OILED ZONE | SUBSURFACE OIL CHARACTER | | | | | | | WATER TABLE | SHEEN COLOUR | CLEAN BELOW | SUBST. TYPE(S) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | MS | LB | UB | OB | cm | cm-cm | SAP | OP | PP | OR | OF | TR | NO | cm | B, R, S, N | Yes / No | |
| | | | | | | | | | | | | | | | | | |

**8 COMMENTS** ecological/recreational/cultural/economic constraints - shorezone biota and wildlife observations - cleanup recommendations

Overbank Survey Required Y / N Overbank Survey Completed Y / N Shoreline Survey Completed Y / N

Fil-in for C62IS with Ops Hot Shot

A: Oiled debris, and vegetation, clean by Ops.
Meet the CTR, NFT

B: NOO

Sketch Yes / No Photos Yes / No Frames/Photographer: _____

Ver. 31 July 2011

2/2 Team #2
19/09/2011
C62 IS (Fill-in)
NFT
NOO
A
B
C63-LB
C62-LB
C63-
ACTIVE LOG
ACTIVE LOG
ACTIVE LOG
Image USDA Farm Service Agency
© 2011 Google
1996
46°01'43.69"N 107°52'15.00"O élév. 864 m

ARCADIS

# C63

DB/6

**RIVER BANK OILING SUMMARY FORM for Silvertip Pipeline Incident** Page 1 of 2

**1 GENERAL INFORMATION**

Segment/Reach ID: C63 Left Bank / Right Bank / Island

Operations Division: C

Survey by: Foot / ATV / Boat / Helicopter / Overlook / _____

Date (dd/mm/yy): 19/09/2011

Time (24h): std / daylight 14:30 hrs to 15:10 hrs

Sun / Clouds / Fog / Rain / Snow / Windy / Calm

Water Level: low - mean - bankfull - overbank; falling - steady - rising

Air Temp + / - 20 deg C

**2 SURVEY TEAM #** 2

| Name | Organization | Signature |
|---|---|---|
| Merlo Gauvreau | Polaris | |
| Mark Ewanic | DEQ | |
| Mark Peterson | DEQ | |

**3 SEGMENT** Total Segment/Reach Length 1135 m Segment/Reach Length Surveyed 267 m

Start GPS: LATITUDE _____ deg. _____ min. LONGITUDE _____ deg. _____ min. Datum: _____

End GPS: LATITUDE _____ deg. _____ min. LONGITUDE _____ deg. _____ min.

**4A RIVER BANK TYPE** SELECT only one primary (P) shoreline type and any number of secondary (S) types. CIRCLE those OILED

Bedrock: Cliff/Ramp ____ Shelf ____ | Manmade: Solid ____ Permeable ____ (type) ____ | Wetland: Swamp ____ Bog/Fen ____ Marsh ____

Sediment Bank: Clay/Mud ____ Sand S Mixed S Pebble/Cobble ____ Boulder ____ Peat/Organic ____ | Vegetated Bank: S | Wooded Upland: P

Sediment Flat: Clay/Mud ____ Sand ____ Mixed/Coarse ____ | Other: ____ | If snow and ice use Winter River SOS

**4B RIVER VALLEY CHARACTER** select as appropriate | complete for primary

Cliff or Bluff: ____ Est Height ____ m | canyon ____ manmade ____ meander ____ confined or leveed ____ | Substrate Type: Mixed

Sloped: ____ (>5°)(15°)(30°) | straight S braided P oxbow ____ flood plain valley ____ | Forested / Vegetated / Bare

**4C RIVER CHANNEL CHARACTER** circle or select as appropriate

est. width: < 1m 1–10 m 10–100 m >100m | est. water depth: <1 m 1-3 m 3-10 m >10 m ____ m

shoal(s) present Y / N | point bar present Y / N | bar-shoal substrate: silt / sand / gravel / cobble / boulder / bedrock / debris

seasonal water level: low / mean / bank full / overbank flow | est. change over next 7 days: falling – same – rising

**5 OPERATIONAL FEATURES** Suitable backshore staging Y / N | Access: Direct from backshore Y / N Alongshore from next segment Y / N

Debris: Y / N oiled Y / N amount ____ bags or ____ trucks | access restrictions

Oiled trees/shrubs Y / N | River Current strong Y / N | Other Features:

**6 SURFACE OILING CONDITIONS** begin with "A" in the lowest tidal zone - circle the zone/s that correspond to primary shoreline type

| OIL ZONE ID | RIVER BANK ZONE | | | | OIL COVER | | | OIL THICKNESS | | | | | OIL CHARACTER | | | | | | | | SUBST. TYPE(S) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | MS | LB | UB | OB | Length m | Width m | Distrib. % | TO | CV | CT | ST | FL | FR | MS | TB | PT | TC | SR | AP | NO | |
| A | | | | X | 230 | 6160 | <1 | | | S | P | | | | | | | X | | | Db |
| | | | | | | | | | | | | | | | | | | | | | |
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| | | | | | | | | | | | | | | | | | | | | | |

2341

**7 SUBSURFACE OILING CONDITIONS** use letter for ZONE location plus Number of pit or trench — e.g., "A1"

| TRENCH or PIT NO. | RIVER BANK ZONE | | | | MAX. PIT DEPTH | OILED ZONE | SUBSURFACE OIL CHARACTER | | | | | | | WATER TABLE | SHEEN COLOUR | CLEAN BELOW | SUBST. TYPE(S) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | MS | LB | UB | OB | cm | cm-cm | SAP | OP | PP | OR | OF | TR | NO | cm | B, R, S, N | Yes / No | |
| | | | | | | | | | | | | | | | | | |

**8 COMMENTS** ecological/recreational/cultural/economic constraints - shorezone biota and wildlife observations - cleanup recommendations

Overbank Survey Required Y / N Overbank Survey Completed Y / N Shoreline Survey Completed Y / N

A: Fill-in for C63IS with Ops Hot Shots
Oiled debris, clean by ops
Meet the conditions of the CTR, NFT

Sketch Yes / No Photos Yes / No Frames/Photographer: _____

Ver. 31 July 2011

2/2
Team #2 Fill-in
19/09/2011 C 63 IS
C63-LB
ACTIVE LOG
ACTIVE LOG
ACTIVE LOG
C62-LB
C63-
NFT
Image USDA Farm Service Agency
© 2011 Google
1996
46°01'43.69"N 107°52'15.00"O élév. 864 m

ARCADIS

# C65

DB/G

**RIVER BANK OILING SUMMARY FORM for Silvertip Pipeline Incident** Page 1 of 2

| 1 GENERAL INFORMATION | Date (dd/mm/yy) | Time (24h): std / daylight | Water Level |
|---|---|---|---|
| Segment/Reach ID: C65 Left Bank / Right Bank / Island | 17/09/11 | 0940 hrs to 1145 hrs | low - mean - bankfull - overbank |
| Operations Division: C | | | falling - steady – rising |
| Survey by: Foot / ATV / Boat / Helicopter / Overlook / _____ | | Sun / Clouds / Fog / Rain / Snow / Windy / Calm | Air Temp + / - 23 deg C |

**2 SURVEY TEAM #** 3

| Name | Organization | Signature |
|---|---|---|
| Nathan Hammond | Cardno Entrix | |
| John Brown | DEQ | |
| Jeffery Frank Herrick | DEQ | |

**3 SEGMENT** Total Segment/Reach Length 1190 m Segment/Reach Length Surveyed 930 m

Start GPS: LATITUDE _____ deg. _____ min. LONGITUDE _____ deg. _____ min. Datum: _____

End GPS: LATITUDE _____ deg. _____ min. LONGITUDE _____ deg. _____ min.

**4A RIVER BANK TYPE** SELECT only one primary (P) shoreline type and any number of secondary (S) types. CIRCLE those OILED

Bedrock: Cliff/Ramp____ Shelf____ | Manmade: Solid___ Permeable___ (type)____ | Wetland: Swamp____ Bog/Fen____ Marsh____

Sediment Bank: Clay/Mud____ Sand____ Mixed X Pebble/Cobble____ Boulder____ Peat/Organic____ | Vegetated Bank: S | Wooded Upland: P

Sediment Flat: Clay/Mud____ Sand____ Mixed/Coarse____ | Other: ____ | If snow and ice use Winter River SOS

**4B RIVER VALLEY CHARACTER** select as appropriate | complete for primary

Cliff or Bluff: ____ Est Height ____ m | canyon____ manmade____ meander ____ confined or leveed ____ | Substrate Type: _____

Sloped: ___ (>5°)(15°)(30°) | straight____ braided X oxbow____ flood plain valley____ | Forested / Vegetated / Bare

**4C RIVER CHANNEL CHARACTER** circle or select as appropriate

est. width: < 1m 1–10 m 10–100 m >100m | est. water depth: <1 m 1-3 m 3-10 m >10 m ____ m

shoal(s) present Y / N | point bar present Y / N | bar-shoal substrate: silt / sand / gravel / cobble / boulder / bedrock / debris

seasonal water level: low / mean / bank full / overbank flow | est. change over next 7 days: falling — same — rising

**5 OPERATIONAL FEATURES** Suitable backshore staging Y / N | Access: Direct from backshore Y / N Alongshore from next segment Y / N

Debris Y / N oiled Y / N amount < 1 bags or ____ trucks | access restrictions

Oiled trees/shrubs Y / N | River Current strong Y / N | Other Features:

**6 SURFACE OILING CONDITIONS** begin with "A" in the lowest tidal zone - circle the zone/s that correspond to primary shoreline type

| OIL ZONE ID | RIVER BANK ZONE | | | | OIL COVER | | | OIL THICKNESS | | | | | OIL CHARACTER | | | | | | | | SUBST. TYPE(S) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | MS | LB | UB | OB | Length m | Width m | Distrib. % | TO | CV | CT | ST | FL | FR | MS | TB | PT | TC | SR | AP | NO | |
| A | | | S | P | 930 | 160 | 0 | | | | | | | | | | | | | ✓ | |
| B | | | | P | 50 | 20 | <1 | | | S | P | | | | | | X | | | | Veg; Debris |

2343 PCC2 1003 2344

**7 SUBSURFACE OILING CONDITIONS** use letter for ZONE location plus Number of pit or trench — e.g., "A1"

| TRENCH or PIT NO. | RIVER BANK ZONE | | | | MAX. PIT DEPTH | OILED ZONE | SUBSURFACE OIL CHARACTER | | | | | | | WATER TABLE | SHEEN COLOUR | CLEAN BELOW | SUBST. TYPE(S) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | MS | LB | UB | OB | cm | cm-cm | SAP | OP | PP | OR | OF | TR | NO | cm | B, R, S, N | Yes / No | |
| | | | | | | | | | | | | | | | | | |

**8 COMMENTS** ecological/recreational/cultural/economic constraints - shorezone biota and wildlife observations - cleanup recommendations

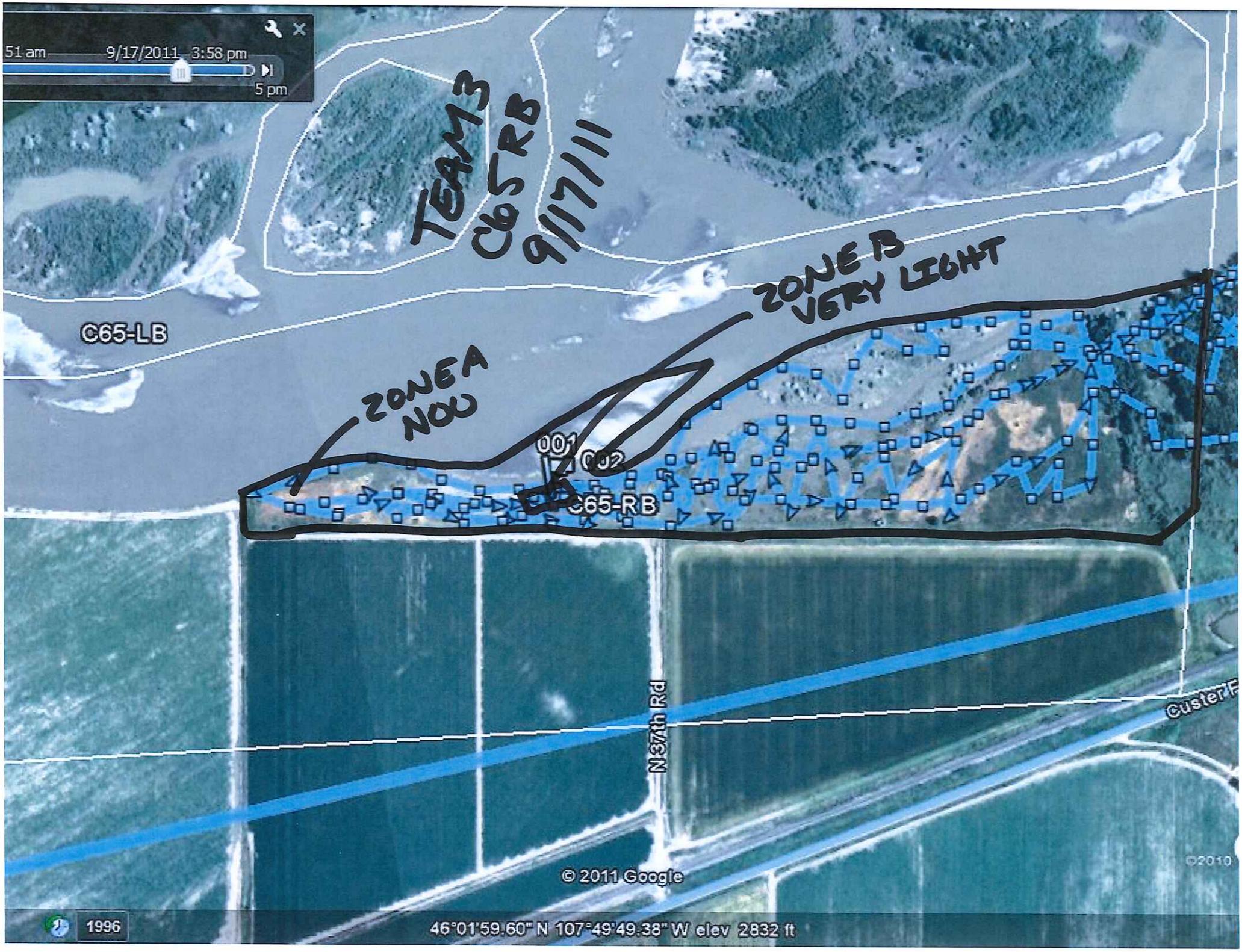
Overbank Survey Required Y / N Overbank Survey Completed Y / N Shoreline Survey Completed Y / N

Zone A - NOO; No Treatment Required

Zone B - ATM1, ATM2 Utilized by hot shot crew to collect <1 bag of oiled vegetation. No Further Treatment.

Sketch Yes / No Photos Yes / No Frames/Photographer: _____

Ver. 31 July 2011


51 am
9/17/2011 3:58 pm
5 pm
TEAM 3
C65 RB
9/17/11
ZONE B
VERY LIGHT
ZONE A
NOW
C65-LB
001
002
C65-RB
N 37th Rd
Custer F
© 2011 Google
©2010
1996
46°01'59.60" N 107°49'49.38" W elev 2832 ft

ARCADIS

# C66

DB/6

**RIVER BANK OILING SUMMARY FORM for Silvertip Pipeline Incident** Page 1 of 2

| 1 GENERAL INFORMATION | Date (dd/mm/yy) | Time (24h): std / daylight | Water Level |
|---|---|---|---|
| Segment/Reach ID: C66 Left Bank / (Right Bank) / Island | 17/09/11 | 0940 hrs to 1145 hrs | low - (mean) - bankfull - overbank |
| Operations Division: C | | | (falling) - steady – rising |
| Survey by: (Foot) / ATV / Boat / Helicopter / Overlook / _____ | | (Sun) / (Clouds) / Fog / (Rain) Snow / Windy / (Calm) | Air Temp + / - 23 deg C |

| 2 SURVEY TEAM # 3 | Name | Organization | Signature |
|---|---|---|---|
| | Nathan Hammond | Cardno Entrix | |
| | John Brown | DEQ | |
| | Jeffery Frank Herrick | DEQ | |
| | | | |
| | | | |
| | | | |
| | | | |

**3 SEGMENT** Total Segment/Reach Length 890 m Segment/Reach Length Surveyed 290 m

Start GPS: LATITUDE _____ deg. _____ min. LONGITUDE _____ deg. _____ min. Datum: _____

End GPS: LATITUDE _____ deg. _____ min. LONGITUDE _____ deg. _____ min.

**4A RIVER BANK TYPE** SELECT only one primary (P) shoreline type and any number of secondary (S) types. CIRCLE those OILED

Bedrock: Cliff/Ramp____ Shelf____ | Manmade: Solid___ Permeable___ (type)____ | Wetland: Swamp____ Bog/Fen____ Marsh _____

Sediment Bank: Clay/Mud____ Sand____ Mixed X Pebble/Cobble____ Boulder____ Peat/Organic____ | Vegetated Bank: S | Wooded Upland: (P)

Sediment Flat: Clay/Mud____ Sand____ Mixed/Coarse____ | Other: ____ | If snow and ice use Winter River SOS

**4B RIVER VALLEY CHARACTER** select as appropriate | complete for primary

Cliff or Bluff:____ Est Height ____m | canyon____ manmade____ meander ____ confined or leveed ____ | Substrate Type: _____

Sloped:___(>5°)(15°)(30°) | straight____ braided X oxbow____ flood plain valley____ | Forested / (Vegetated) / Bare

**4C RIVER CHANNEL CHARACTER** circle or select as appropriate

est. width : < 1m 1–10 m 10–100 m (>100m) | est. water depth : <1 m (1-3 m) 3-10 m >10 m ____ m

shoal(s) present Y / (N) point bar present Y / (N) | bar-shoal substrate : silt / sand / gravel / cobble / boulder / bedrock / debris

seasonal water level: low / (mean) / bank full / overbank flow | est. change over next 7 days : (falling) — same — rising

**5 OPERATIONAL FEATURES** Suitable backshore staging (Y) / N Access: Direct from backshore (Y) / N Alongshore from next segment (Y) / N

Debris: (Y) / N oiled Y / (N) amount <1 bags or ____ trucks access restrictions

Oiled trees/shrubs (Y) / N River Current strong (Y) / N Other Features:

**6 SURFACE OILING CONDITIONS** begin with "A" in the lowest tidal zone - circle the zone/s that correspond to primary shoreline type

| OIL ZONE ID | RIVER BANK ZONE | | | | OIL COVER | | | OIL THICKNESS | | | | | OIL CHARACTER | | | | | | | | SUBST. TYPE(S) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | MS | LB | UB | OB | Length m | Width m | Distrib. % | TO | CV | CT | ST | FL | FR | MS | TB | PT | TC | SR | AP | NO | |
| A | | | S | P | 290 | 370 | 0 | | | | | | | | | | | | | ✓ | |
| B | | | | P | 2 | 30 | <1 | | | S | P | | | | | | x | | | | Veg |
| | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | |
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| | | | | | | | | | | | | | | | | | | | | | |

2345
2346

**7 SUBSURFACE OILING CONDITIONS** use letter for ZONE location plus Number of pit or trench — e.g., "A1"

| TRENCH or PIT NO. | RIVER BANK ZONE | | | | MAX. PIT DEPTH | OILED ZONE | SUBSURFACE OIL CHARACTER | | | | | | | WATER TABLE | SHEEN COLOUR | CLEAN BELOW | SUBST. TYPE(S) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | MS | LB | UB | OB | cm | cm-cm | SAP | OP | PP | OR | OF | TR | NO | cm | B, R, S, N | Yes / No | |
| | | | | | | | | | | | | | | | | | |

**8 COMMENTS** ecological/recreational/cultural/economic constraints - shorezone biota and wildlife observations - cleanup recommendations

Overbank Survey Required (Y) / N Overbank Survey Completed (Y) / N Shoreline Survey Completed (Y) / N

Zone A - NOO - No Treatment Required

Zone B - ATM1 Utilized by hot shot crew to collect <1 bag of oiled vegetation. No Further Treatment.

Sketch (Yes) / No Photos Yes / (No) Frames/Photographer: _____

51 am
9/17/2011 3:58 pm
5 pm
ZONE A - NOO
Team 3
Club RB
9/17/11
C67-IS
ZONE B
VERY LIGHT
C66-RB
Custer Frontage Rd
© 2011 Google
©2010
1996
46°02'04.92" N 107°49'00.82" W elev 2822 ft

ARCADIS

# C73

DB/G

**RIVER BANK OILING SUMMARY FORM for Silvertip Pipeline Incident**



| 1 GENERAL INFORMATION | Date (dd/mm/yy) | Time (24h): std / daylight | Water Level |
|---|---|---|---|
| Segment/Reach ID: C73 Left Bank / **Right Bank** / Island | 05/09/11 | | low - **mean** - bankfull - overbank |
| Operations Division: C | | 0900 hrs to 1400 hrs | **falling** - steady – rising |
| Survey by: **Foot** / ATV / Boat / Helicopter / Overlook / _____ | **Sun** / Clouds / Fog / Rain / Snow / Windy / Calm | | Air Temp + / - 30 deg C |

| 2 SURVEY TEAM # 5 | Name | Organization | Signature |
|---|---|---|---|
| | Josh Hofkes | Cardno ENTRIX | |
| | Robert Ashton | DEQ | R. Ashton |
| | Juan Patino | USCG | |

**3 SEGMENT** Total Segment/Reach Length _____ m Segment/Reach Length Surveyed 1228 m

**Start GPS:** LATITUDE _____ deg. _____ min. LONGITUDE _____ deg. _____ min. **Datum:** _____

**End GPS:** LATITUDE _____ deg. _____ min. LONGITUDE _____ deg. _____ min.

**4A RIVER BANK TYPE** *SELECT only one primary (P) shoreline type and any number of secondary (S) types. CIRCLE those OILED*

**Bedrock:** Cliff/Ramp____ Shelf____ **Manmade:** Solid___ Permeable___ (type)____ **Wetland:** Swamp____ Bog/Fen____ Marsh _____

**Sediment Bank:** Clay/Mud____ Sand____ Mixed____ Pebble/Cobble____ Boulder____ Peat/Organic____ **Vegetated Bank:**____ **Wooded Upland:** ____

**Sediment Flat:** Clay/Mud____ Sand____ Mixed/Coarse____ **Other:** ____ If snow and ice use Winter River SOS

**4B RIVER VALLEY CHARACTER** *select as appropriate* *complete for primary*

Cliff or Bluff:____Est Height ____m canyon____ manmade____ meander ____ confined or leveed ____ Substrate Type: _____

Sloped:___(>5°)(15°)(30°) straight____ braided ____ oxbow____ flood plain valley____ Forested / Vegetated / Bare

**4C RIVER CHANNEL CHARACTER** *circle or select as appropriate*

**est. width :** < 1m 1–10 m 10–100 m >100m **est. water depth :** <1 m 1-3 m 3-10 m >10 m ____ m

**shoal(s) present** Y / N **point bar present** Y / N **bar-shoal substrate :** silt / sand / gravel / cobble / boulder / bedrock / debris

**seasonal water level:** low / mean / bank full / overbank flow **est. change over next 7 days :** falling — same — rising

**5 OPERATIONAL FEATURES** Suitable backshore staging Y / N **Access**: Direct from backshore Y / N Alongshore from next segment Y / N

**Debris**: Y / N oiled Y / N amount ____bags or ____trucks access restrictions

Oiled trees/shrubs Y / N River Current strong Y / N Other Features:

**6 SURFACE OILING CONDITIONS** *begin with "A" in the lowest tidal zone - circle the zone/s that correspond to primary shoreline type*

| OIL ZONE ID | RIVER BANK ZONE | | | | OIL COVER | | | OIL THICKNESS | | | | | OIL CHARACTER | | | | | | | | SUBST. TYPE(S) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | Length | Width | Distrib. | | | | | | | | | | | | | | |
| | MS | LB | UB | OB | m | m | % | TO | CV | CT | ST | FL | FR | MS | TB | PT | TC | SR | AP | NO | |
| 2165 A | | | | X | 1228 | 684 | 0 | | | | | | | | | | | | | X | mix |
| 2166 B | | | | X | 200 | 20 | 20 | | | | | ⊗ | ⊗ | | | | | | | | $H_2O$ |
| | | | | | [redacted] | [redacted] | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | |
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**7 SUBSURFACE OILING CONDITIONS** *use letter for ZONE location plus Number of pit or trench — e.g., "A1"*

| TRENCH or PIT NO. | RIVER BANK ZONE | | | | MAX. PIT DEPTH | OILED ZONE | SUBSURFACE OIL CHARACTER | | | | | | | WATER TABLE | SHEEN COLOUR | CLEAN BELOW | SUBST. TYPE(S) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | MS | LB | UB | OB | cm | cm-cm | SAP | OP | PP | OR | OF | TR | NO | cm | B, R, S, N | Yes / No | |
| | | | | | | | | | | | | | | | | | |

**8 COMMENTS** *ecological/recreational/cultural/economic constraints - shorezone biota and wildlife observations - cleanup recommendations*

Overbank Survey Required (Y) / N Overbank Survey Completed (Y) / N Shoreline Survey Completed (Y) / N

A: N.O.O. => N.F.T.

B: Silver sheen on isolated oxbow

=> N.F.T.

**Sketch** Yes / No **Photos** Yes / No **Frames/Photographer:** _____

TEAM 5

September 5, 2011

C73-RB

A: N.O.O. ⇒ N.F.T

B: Silversheen N.F.T.
20% cover

## Appendix F

Completed SCAT Segment Sign-Off Forms

# SCAT SEGMENT OPERATIONS COMPLETION SIGN-OFF SHEET

## SILVERTIP PIPELINE RELEASE

Segment C56 RB

Date of Survey 9/16/11

Dates of Initial SCAT Assessments 13 Aug 2011 (B)
(to be filled out by SCAT Data Management)

CTR(s) Associated with SCAT Segment 61

Segment has been treated by Operations or an Operations Hotshot Team (YES) NO

Segment Assessment Complete[1] ☐

Partial Segment Assessment ☒

*The undersigned are in agreement that the above segment or partial segment meets the Approved Treatment Methods Target Endpoints.*

This Segment is Conditionally Approved ☐
(See attached Post Inspection Survey Transmittal (POST))

*The undersigned are in agreement that the above segment meets the Approved Treatment Methods Target Endpoints conditional upon completion of the treatment identified in the attached Post Inspection Survey Transmittal (POST).*

| Sign Name | Print Name/ Affiliation | Date |
|---|---|---|
| | No federal rep | |

**Federal Representative (EPA/USCG)**

| Sign Name | Print Name/ Affiliation | Date |
|---|---|---|
| | John Brown MDEQ | 9/16/11 |

**State Representative (DEQ/FWP)**

| Sign Name | Print Name/ Affiliation | Date |
|---|---|---|
| | Nathan Hammond / Cardno Entrix | 9/16/11 |

**RP Representative (SCAT RP Representative)**

Once all applicable SCAT Segments (i.e. LB, RB, and IS) within a particular SCAT Area (i.e. A21) have been successfully signed-off during a formal SCAT Assessment, the SCAT Area will achieve the Response Endpoints and an Area Transition Report will be completed and submitted to EPA and DEQ.

[1] A Segment Sign-Off Assessment is considered complete when all accessible lands that have not already been signed-off by a claims liaison have been surveyed. If any previous SCAT Assessments were conducted, all lands that were originally recommended for treatment must be re-surveyed in the Sign-Off Assessment. If the conducted survey does not meet these conditions it is considered a Partial Assessment. Multiple Partial Assessments that meet the conditions of a Complete Assessment may together constitute a Complete Sign-Off Assessment.

# SCAT Segment Operations Completion Sign-Off Sheet

## Silvertip Pipeline Release

Segment C56RB

Date of Survey 19/09/2011

Dates of Initial SCAT Assessments 13 AUG 2011
(to be filled out by SCAT Data Management)

CTR(s) Associated with SCAT Segment 61

Segment has been treated by Operations or an Operations Hotshot Team YES NO

Segment Assessment Complete[1] ☒

Partial Segment Assessment ☐

*The undersigned are in agreement that the above segment or partial segment meets the Approved Treatment Methods Target Endpoints.*

This Segment is Conditionally Approved ☐
(See attached Post Inspection Survey Transmittal (POST))

*The undersigned are in agreement that the above segment meets the Approved Treatment Methods Target Endpoints conditional upon completion of the treatment identified in the attached Post Inspection Survey Transmittal (POST).*

| Sign Name | Print Name/ Affiliation | Date |
|---|---|---|
| | No federal rep. | |
| **Federal Representative (EPA/USCG)** | | |
| Mark Peterson | Mark Peterson/DEQ | 9/20/11 |
| **State Representative (DEQ/FWP)** | | |
| [illegible] | Merlo Gaovesca, Polaris | 19/09/2011 |
| **RP Representative (SCAT RP Representative)** | | |

Once all applicable SCAT Segments (i.e. LB, RB, and IS) within a particular SCAT Area (i.e. A21) have been successfully signed-off during a formal SCAT Assessment, the SCAT Area will achieve the Response Endpoints and an Area Transition Report will be completed and submitted to EPA and DEQ.

[1] A Segment Sign-Off Assessment is considered complete when all accessible lands that have not already been signed-off by a claims liaison have been surveyed. If any previous SCAT Assessments were conducted, all lands that were originally recommended for treatment must be re-surveyed in the Sign-Off Assessment. If the conducted survey does not meet these conditions it is considered a Partial Assessment. Multiple Partial Assessments that meet the conditions of a Complete Assessment may together constitute a Complete Sign-Off Assessment.

# SCAT Segment Operations Completion Sign-Off Sheet

## Silvertip Pipeline Release

Segment C56 1S

Date of Survey 17-09-2011

Dates of Initial SCAT Assessments 18 Aug 2011 (to be filled out by SCAT Data Management)

CTR(s) Associated with SCAT Segment 61

Segment has been treated by Operations or an Operations Hotshot Team YES NO

Segment Assessment Complete[1] ☒

Partial Segment Assessment ☐

*The undersigned are in agreement that the above segment or partial segment meets the Approved Treatment Methods Target Endpoints.*

This Segment is Conditionally Approved ☐
(See attached Post Inspection Survey Transmittal (POST))

*The undersigned are in agreement that the above segment meets the Approved Treatment Methods Target Endpoints conditional upon completion of the treatment identified in the attached Post Inspection Survey Transmittal (POST).*

| Sign Name | Print Name/ Affiliation | Date |
|---|---|---|
| | No federal rep. | |
| **Federal Representative (EPA/USCG)** | | |
| Daryl Reed | Daryl Reed, DEQ | 9/17/11 |
| **State Representative (DEQ/FWP)** | | |
| | Merlo Gauvreau, Polaris | 17-09-2011 |
| **RP Representative (SCAT RP Representative)** | | |

Once all applicable SCAT Segments (i.e. LB, RB, and IS) within a particular SCAT Area (i.e. A21) have been successfully signed-off during a formal SCAT Assessment, the SCAT Area will achieve the Response Endpoints and an Area Transition Report will be completed and submitted to EPA and DEQ.

[1] A Segment Sign-Off Assessment is considered complete when all accessible lands that have not already been signed-off by a claims liaison have been surveyed. If any previous SCAT Assessments were conducted, all lands that were originally recommended for treatment must be re-surveyed in the Sign-Off Assessment. If the conducted survey does not meet these conditions it is considered a Partial Assessment. Multiple Partial Assessments that meet the conditions of a Complete Assessment may together constitute a Complete Sign-Off Assessment.

# SCAT SEGMENT OPERATIONS COMPLETION SIGN-OFF SHEET

## SILVERTIP PIPELINE RELEASE

Segment C57 - ~~RB~~ ~~IS~~ IS ck 9/24/11 ~~RB~~ ck 9/23/11 Date of Survey Sept. 17, 2011

Dates of Initial SCAT Assessments 16 Aug 2011 (to be filled out by SCAT Data Management)

CTR(s) Associated with SCAT Segment 61

Segment has been treated by Operations or an Operations Hotshot Team YES NO

Segment Assessment Complete[1] ☒

Partial Segment Assessment ☒

*The undersigned are in agreement that the above segment or partial segment meets the Approved Treatment Methods Target Endpoints.*

This Segment is Conditionally Approved ☐
(See attached Post Inspection Survey Transmittal (POST))

*The undersigned are in agreement that the above segment meets the Approved Treatment Methods Target Endpoints conditional upon completion of the treatment identified in the attached Post Inspection Survey Transmittal (POST).*

| Sign Name | Print Name/ Affiliation | Date |
|---|---|---|
| | No federal rep. | |
| **Federal Representative (EPA/USCG)** | | |
| | Jessica Ross / DEQ | 9/17/11 |
| **State Representative (DEQ/FWP)** | | |
| | Todd Farrar / Polaris | 9/17/11 |
| **RP Representative (SCAT RP Representative)** | | |

Once all applicable SCAT Segments (i.e. LB, RB, and IS) within a particular SCAT Area (i.e. A21) have been successfully signed-off during a formal SCAT Assessment, the SCAT Area will achieve the Response Endpoints and an Area Transition Report will be completed and submitted to EPA and DEQ.

[1] A Segment Sign-Off Assessment is considered complete when all accessible lands that have not already been signed-off by a claims liaison have been surveyed. If any previous SCAT Assessments were conducted, all lands that were originally recommended for treatment must be re-surveyed in the Sign-Off Assessment. If the conducted survey does not meet these conditions it is considered a Partial Assessment. Multiple Partial Assessments that meet the conditions of a Complete Assessment may together constitute a Complete Sign-Off Assessment.

# SCAT Segment Operations Completion Sign-Off Sheet

## Silvertip Pipeline Release

Segment C61-LB

Date of Survey Sept. 16, 2011

Dates of Initial SCAT Assessments 25 Jul 2011 (to be filled out by SCAT Data Management)

CTR(s) Associated with SCAT Segment 62

Segment has been treated by Operations or an Operations Hotshot Team YES (NO)

Segment Assessment Complete[1] [X]

Partial Segment Assessment [ ]

*The undersigned are in agreement that the above segment or partial segment meets the Approved Treatment Methods Target Endpoints.*

This Segment is Conditionally Approved [ ]
(See attached Post Inspection Survey Transmittal (POST))

*The undersigned are in agreement that the above segment meets the Approved Treatment Methods Target Endpoints conditional upon completion of the treatment identified in the attached Post Inspection Survey Transmittal (POST).*

| Sign Name | Print Name/ Affiliation | Date |
|---|---|---|
| No federal rep. | | |

**Federal Representative (EPA/USCG)**

| Sign Name | Print Name/ Affiliation | Date |
|---|---|---|
| [signature] | Jessica Ross / DEQ | 9/16/11 |

**State Representative (DEQ/FWP)**

| Sign Name | Print Name/ Affiliation | Date |
|---|---|---|
| [signature] | Todd Farrar / Polaris | 9/16/11 |

**RP Representative (SCAT RP Representative)**

Once all applicable SCAT Segments (i.e. LB, RB, and IS) within a particular SCAT Area (i.e. A21) have been successfully signed-off during a formal SCAT Assessment, the SCAT Area will achieve the Response Endpoints and an Area Transition Report will be completed and submitted to EPA and DEQ.

[1] A Segment Sign-Off Assessment is considered complete when all accessible lands that have not already been signed-off by a claims liaison have been surveyed. If any previous SCAT Assessments were conducted, all lands that were originally recommended for treatment must be re-surveyed in the Sign-Off Assessment. If the conducted survey does not meet these conditions it is considered a Partial Assessment. Multiple Partial Assessments that meet the conditions of a Complete Assessment may together constitute a Complete Sign-Off Assessment.

# SCAT SEGMENT OPERATIONS COMPLETION SIGN-OFF SHEET

## SILVERTIP PIPELINE RELEASE

Segment C62-LB

Date of Survey Sept. 16, 2011

Dates of Initial SCAT Assessments 25 Jul 2011 (to be filled out by SCAT Data Management)

CTR(s) Associated with SCAT Segment 62

Segment has been treated by Operations or an Operations Hotshot Team YES (NO)

Segment Assessment Complete[1] ☒

Partial Segment Assessment ☐

*The undersigned are in agreement that the above segment or partial segment meets the Approved Treatment Methods Target Endpoints.*

This Segment is Conditionally Approved ☐
(See attached Post Inspection Survey Transmittal (POST))

*The undersigned are in agreement that the above segment meets the Approved Treatment Methods Target Endpoints conditional upon completion of the treatment identified in the attached Post Inspection Survey Transmittal (POST).*

| Sign Name | Print Name/ Affiliation | Date |
|---|---|---|
| No federal rep. | | |
| **Federal Representative (EPA/USCG)** | | |
| [signature] | Jessica Ross / DEQ | 9/16/11 |
| **State Representative (DEQ/FWP)** | | |
| [signature] | Todd Farrar / Polaris | 9/16/11 |
| **RP Representative (SCAT RP Representative)** | | |

Once all applicable SCAT Segments (i.e. LB, RB, and IS) within a particular SCAT Area (i.e. A21) have been successfully signed-off during a formal SCAT Assessment, the SCAT Area will achieve the Response Endpoints and an Area Transition Report will be completed and submitted to EPA and DEQ.

[1] A Segment Sign-Off Assessment is considered complete when all accessible lands that have not already been signed-off by a claims liaison have been surveyed. If any previous SCAT Assessments were conducted, all lands that were originally recommended for treatment must be re-surveyed in the Sign-Off Assessment. If the conducted survey does not meet these conditions it is considered a Partial Assessment. Multiple Partial Assessments that meet the conditions of a Complete Assessment may together constitute a Complete Sign-Off Assessment.

# SCAT Segment Operations Completion Sign-Off Sheet

## Silvertip Pipeline Release

Segment C62 - Island

Date of Survey Sept. 16, 2011

Dates of Initial SCAT Assessments 09 Sep 2011 (ES)
(to be filled out by SCAT Data Management)

CTR(s) Associated with SCAT Segment 62

Segment has been treated by Operations or an Operations Hotshot Team YES NO

Segment Assessment Complete[1] ☒

Partial Segment Assessment ☐

*The undersigned are in agreement that the above segment or partial segment meets the Approved Treatment Methods Target Endpoints.*

This Segment is Conditionally Approved ☐
(See attached Post Inspection Survey Transmittal (POST))

*The undersigned are in agreement that the above segment meets the Approved Treatment Methods Target Endpoints conditional upon completion of the treatment identified in the attached Post Inspection Survey Transmittal (POST).*

| Sign Name | Print Name/ Affiliation | Date |
|---|---|---|
| | No federal rep. | |

**Federal Representative (EPA/USCG)**

| Sign Name | Print Name/ Affiliation | Date |
|---|---|---|
| | Jessica Ross / DEQ | 9/16/11 |

**State Representative (DEQ/FWP)**

| Sign Name | Print Name/ Affiliation | Date |
|---|---|---|
| | Todd Farrar / Polaris | 9/16/11 |

**RP Representative (SCAT RP Representative)**

Once all applicable SCAT Segments (i.e. LB, RB, and IS) within a particular SCAT Area (i.e. A21) have been successfully signed-off during a formal SCAT Assessment, the SCAT Area will achieve the Response Endpoints and an Area Transition Report will be completed and submitted to EPA and DEQ.

[1] A Segment Sign-Off Assessment is considered complete when all accessible lands that have not already been signed-off by a claims liaison have been surveyed. If any previous SCAT Assessments were conducted, all lands that were originally recommended for treatment must be re-surveyed in the Sign-Off Assessment. If the conducted survey does not meet these conditions it is considered a Partial Assessment. Multiple Partial Assessments that meet the conditions of a Complete Assessment may together constitute a Complete Sign-Off Assessment.

# SCAT Segment Operations Completion Sign-Off Sheet

## Silvertip Pipeline Release

Segment C621S

Date of Survey 19-09-2011

Dates of Initial SCAT Assessments 09 SEP 2011 (to be filled out by SCAT Data Management)

CTR(s) Associated with SCAT Segment 61

Segment has been treated by Operations or an Operations Hotshot Team YES NO

Segment Assessment Complete[1] ☒

Partial Segment Assessment ☐

*The undersigned are in agreement that the above segment or partial segment meets the Approved Treatment Methods Target Endpoints.*

This Segment is Conditionally Approved ☐
(See attached Post Inspection Survey Transmittal (POST))

*The undersigned are in agreement that the above segment meets the Approved Treatment Methods Target Endpoints conditional upon completion of the treatment identified in the attached Post Inspection Survey Transmittal (POST).*

| Sign Name | Print Name/ Affiliation | Date |
|---|---|---|
| | No federal rep. | |
| **Federal Representative (EPA/USCG)** | | |
| | Mark Peterson / DEQ | 9/20/11 |
| **State Representative (DEQ/FWP)** | | |
| | Merlo Gauvreau, Polaris | 19/09/2011 |
| **RP Representative (SCAT RP Representative)** | | |

Once all applicable SCAT Segments (i.e. LB, RB, and IS) within a particular SCAT Area (i.e. A21) have been successfully signed-off during a formal SCAT Assessment, the SCAT Area will achieve the Response Endpoints and an Area Transition Report will be completed and submitted to EPA and DEQ.

[1] A Segment Sign-Off Assessment is considered complete when all accessible lands that have not already been signed-off by a claims liaison have been surveyed. If any previous SCAT Assessments were conducted, all lands that were originally recommended for treatment must be re-surveyed in the Sign-Off Assessment. If the conducted survey does not meet these conditions it is considered a Partial Assessment. Multiple Partial Assessments that meet the conditions of a Complete Assessment may together constitute a Complete Sign-Off Assessment.

# SCAT Segment Operations Completion Sign-Off Sheet

## Silvertip Pipeline Release

Segment C63 IS

Date of Survey 19/09/2011

Dates of Initial SCAT Assessments 17 AUG 2011
(to be filled out by SCAT Data Management)

CTR(s) Associated with SCAT Segment 61

Segment has been treated by Operations or an Operations Hotshot Team (YES) NO

Segment Assessment Complete[1] ☒

Partial Segment Assessment ☐

*The undersigned are in agreement that the above segment or partial segment meets the Approved Treatment Methods Target Endpoints.*

This Segment is Conditionally Approved ☐
(See attached Post Inspection Survey Transmittal (POST))

*The undersigned are in agreement that the above segment meets the Approved Treatment Methods Target Endpoints conditional upon completion of the treatment identified in the attached Post Inspection Survey Transmittal (POST).*

| Sign Name | Print Name/ Affiliation | Date |
|---|---|---|
| | No federal rep. | |
| **Federal Representative (EPA/USCG)** | | |
| | MARK EVANIC / DEQ | 20/09/2011 |
| **State Representative (DEQ/FWP)** | | |
| | Merlo GAUVREAU, Polaris | 19/09/2011 |
| **RP Representative (SCAT RP Representative)** | | |

Once all applicable SCAT Segments (i.e. LB, RB, and IS) within a particular SCAT Area (i.e. A21) have been successfully signed-off during a formal SCAT Assessment, the SCAT Area will achieve the Response Endpoints and an Area Transition Report will be completed and submitted to EPA and DEQ.

[1] A Segment Sign-Off Assessment is considered complete when all accessible lands that have not already been signed-off by a claims liaison have been surveyed. If any previous SCAT Assessments were conducted, all lands that were originally recommended for treatment must be re-surveyed in the Sign-Off Assessment. If the conducted survey does not meet these conditions it is considered a Partial Assessment. Multiple Partial Assessments that meet the conditions of a Complete Assessment may together constitute a Complete Sign-Off Assessment.

# SCAT Segment Operations Completion Sign-Off Sheet

## Silvertip Pipeline Release

Segment C65RB

Date of Survey 9/17/11

Dates of Initial SCAT Assessments 06 AUG 2011 (to be filled out by SCAT Data Management)

CTR(s) Associated with SCAT Segment 61

Segment has been treated by Operations or an Operations Hotshot Team (YES) NO

Segment Assessment Complete[1] ☐

Partial Segment Assessment ☒

*The undersigned are in agreement that the above segment or partial segment meets the Approved Treatment Methods Target Endpoints.*

This Segment is Conditionally Approved ☐
(See attached Post Inspection Survey Transmittal (POST))

*The undersigned are in agreement that the above segment meets the Approved Treatment Methods Target Endpoints conditional upon completion of the treatment identified in the attached Post Inspection Survey Transmittal (POST).*

No Federal Representative
Sign Name — Print Name/ Affiliation — Date
**Federal Representative (EPA/USCG)**

JOHN BROWN MDEQ — 9/17/11
Sign Name — Print Name/ Affiliation — Date
**State Representative (DEQ/FWP)**

Nathan Hammond / Cardno Entrix — 9/17/11
Sign Name — Print Name/ Affiliation — Date
**RP Representative (SCAT RP Representative)**

Once all applicable SCAT Segments (i.e. LB, RB, and IS) within a particular SCAT Area (i.e. A21) have been successfully signed-off during a formal SCAT Assessment, the SCAT Area will achieve the Response Endpoints and an Area Transition Report will be completed and submitted to EPA and DEQ.

[1] A Segment Sign-Off Assessment is considered complete when all accessible lands that have not already been signed-off by a claims liaison have been surveyed. If any previous SCAT Assessments were conducted, all lands that were originally recommended for treatment must be re-surveyed in the Sign-Off Assessment. If the conducted survey does not meet these conditions it is considered a Partial Assessment. Multiple Partial Assessments that meet the conditions of a Complete Assessment may together constitute a Complete Sign-Off Assessment.

# SCAT Segment Operations Completion Sign-Off Sheet

## Silvertip Pipeline Release

Segment C66RB Date of Survey 9/17/11

Dates of Initial SCAT Assessments _____ (to be filled out by SCAT Data Management)

CTR(s) Associated with SCAT Segment 61

Segment has been treated by Operations or an Operations Hotshot Team (YES) NO

Segment Assessment Complete[1] ☐

Partial Segment Assessment ☒

*The undersigned are in agreement that the above segment or partial segment meets the Approved Treatment Methods Target Endpoints.*

This Segment is Conditionally Approved ☐
(See attached Post Inspection Survey Transmittal (POST))

*The undersigned are in agreement that the above segment meets the Approved Treatment Methods Target Endpoints conditional upon completion of the treatment identified in the attached Post Inspection Survey Transmittal (POST).*

No Federal Representative.
Sign Name — Print Name/ Affiliation — Date
**Federal Representative (EPA/USCG)**

[signature] John Brown MDEQ 9/17/11
Sign Name — Print Name/ Affiliation — Date
**State Representative (DEQ/FWP)**

[signature] Nathan Hammond / Cardno Entrix 9/17/11
Sign Name — Print Name/ Affiliation — Date
**RP Representative (SCAT RP Representative)**

Once all applicable SCAT Segments (i.e. LB, RB, and IS) within a particular SCAT Area (i.e. A21) have been successfully signed-off during a formal SCAT Assessment, the SCAT Area will achieve the Response Endpoints and an Area Transition Report will be completed and submitted to EPA and DEQ.

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[1] A Segment Sign-Off Assessment is considered complete when all accessible lands that have not already been signed-off by a claims liaison have been surveyed. If any previous SCAT Assessments were conducted, all lands that were originally recommended for treatment must be re-surveyed in the Sign-Off Assessment. If the conducted survey does not meet these conditions it is considered a Partial Assessment. Multiple Partial Assessments that meet the conditions of a Complete Assessment may together constitute a Complete Sign-Off Assessment.

# SCAT SEGMENT OPERATIONS COMPLETION SIGN-OFF SHEET

## SILVERTIP PIPELINE RELEASE

Segment C73 RB

Date of Survey September 5, 2011

Dates of Initial SCAT Assessments 24JUL11 (EI)
(to be filled out by SCAT Data Management)

CTR(s) Associated with SCAT Segment —

Segment has been treated by Operations or an Operations Hotshot Team (YES) NO

Segment Assessment Complete[1] ☒

Partial Segment Assessment ☐

*The undersigned are in agreement that the above segment or partial segment meets the Approved Treatment Methods Target Endpoints.*

This Segment is Conditionally Approved ☐
(See attached Post Inspection Survey Transmittal (POST))

*The undersigned are in agreement that the above segment meets the Approved Treatment Methods Target Endpoints conditional upon completion of the treatment identified in the attached Post Inspection Survey Transmittal (POST).*

| Sign Name | Print Name/ Affiliation | Date |
|---|---|---|
| | Jim Patino | 7SEP11 |

**Federal Representative (EPA/USCG)**

| Sign Name | Print Name/ Affiliation | Date |
|---|---|---|
| Robert Ashton | Robert Ashton / MDEQ | 9/5/2011 |

**State Representative (DEQ/FWP)**

| Sign Name | Print Name/ Affiliation | Date |
|---|---|---|
| | Josh Hafkes / Cardno | 9/5/11 |

**RP Representative (SCAT RP Representative)**

Once all applicable SCAT Segments (i.e. LB, RB, and IS) within a particular SCAT Area (i.e. A21) have been successfully signed-off during a formal SCAT Assessment, the SCAT Area will achieve the Response Endpoints and an Area Transition Report will be completed and submitted to EPA and DEQ.

[1] A Segment Sign-Off Assessment is considered complete when all accessible lands that have not already been signed-off by a claims liaison have been surveyed. If any previous SCAT Assessments were conducted, all lands that were originally recommended for treatment must be re-surveyed in the Sign-Off Assessment. If the conducted survey does not meet these conditions it is considered a Partial Assessment. Multiple Partial Assessments that meet the conditions of a Complete Assessment may together constitute a Complete Sign-Off Assessment.